FOOD AS MEDICINE:
THE CULTURAL POLITICS OF "EATING RIGHT" IN MODERN JAPAN, 1905-1945

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This dissertation traces the history of a dietary reform movement, which sought "right eating" in early twentieth-century Japan. The movement revolved around the concept of *shokuyō*, which broadly referred to the art of nourishing life and vitality—*yōjō*—through proper eating. Its central proposition was a call for the return to "natural and traditional" foodways with a particular emphasis on the consumption of unpolished rice and largely plant-based foods.

Chapter One explores how the movement and discourse of *shokuyō* came into being and developed as a reaction against modern transformations of Japanese society since the Meiji Restoration. It situates the *shokuyō* movement within the context of discourses on hygiene, health, and the overarching project of civilization and enlightenment. Although the late Meiji *shokuyō* advocates sought to associate its ideal diet within the boundaries of orderliness of nature and civil morality, the way to understand the relationship between food and health became increasingly overshadowed by the ascendance of institutionalized nutrition science in the 1920s. Chapter Two looks at how "efficiency" and "rationalization" became catchwords in

food-related public campaigns and medical discourse in which the concept of *shokuyō* was superseded by that of *eiyō* (nutrition). In spite of this, the *shokuyō* movement, evolved toward another direction with a new critique of modern medicine. Chapter Three concerns this transformation by analyzing how Sakurazawa Yukikazu reconceptualized *shokuyō* theories as "Natural Medicine" by drawing on contemporary French critiques of biomedicine and Shinto ideology. The following two chapters trace the movement's transformation in the 1930s from an esoteric and upper-class-centered one into a large-scale movement targeting wider sectors of society. Chapter Four looks at how the campaigners actively intervened in the wartime standardization of brown rice as the national staple in face of total war. Chapter Five on the other hand analyzes the *shokuyō* movement's crusade against sugar consumption in Japanese migrants' diets in Manchuria, showing how they attempted to bring together tenets of "eating right" and the project of Empire.

This dissertation ultimately argues that *shokuyō*'s "traditionalist" and "natural" dietary persuasion fed into a cultural nationalist and imperialist political imagination grounded in a holistic understanding of the body, health, and environment.

BIOGRAPHICAL SKETCH

Sookyeong Hong received B.A.s in Chinese Language and Literature & East Asian History in 2003 and a M.A. in Modern Japanese History in 2007 from Yonsei University in Seoul, South Korea.

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INTRODUCTION:

THE CULTURAL POLITICS OF "EATING RIGHT"

In the early years of the twenty-first century, the long-forgotten term *shokuiku* (食育food education) resurfaced in Japanese vocabulary when the Liberal Democratic Party (LDP) launched the *Shokuiku* Research Committee in 2002 and the Koizumi Administration enacted the *Shokuiku* Law in 2005 (*Shokuiku Kihonhō*). The preamble of the Law proclaimed that "for the development of our nation, it is essential that children foster sound minds and bodies and thrive in the international society of the future; it is just as well that all our citizens (*kokumin*) nurture sound minds and bodies, thereby leading vibrant lives throughout their lifetime." To this end, the Law declared that *shokuiku* ought to be the foundation of intellectual, moral, and physical education (知育・徳育・体育).[1] In reality, this government-led food education program aimed to tackle several contemporary "food problems" such as an increase of metabolic syndrome, eating alone or separately (孤食 or 個食*koshoku*), the skipping of breakfast, and the disappearance of home cooking as well as the practice of families eating together.[2]

As the tasks and rationale of the *shokuiku* initiative reveal, the program was geared toward public campaigns for individual awareness and enlightenment, rather than for dealing with regulatory measures or policy reforms at the level of the agri-food system. In the course of its initial setup of the Committee, the *shokuiku* program excluded existing grass-roots food activisms such as those concerned with consumer

[1] "Shokuiku Kihonhō (Heisei 17 nen hōrei dai 63 gō), *Shokuiku Hakusho* 2005, 152-156.
[2] Aya Hirata Kimura, "Nationalism, Patriarchy, and Moralism: The Government-Led Food Reform in Contemporary Japan," *Food and Foodways*, 19:3 (2011): 209-210.

cooperatives, anti-GMOs, organic agriculture, and local foods.[3] Instead, its major dictates focused on the importance of individual choice on what and how to eat. In addition, the program valorized family commensality (*kyōshoku*) and *washoku* (Japanese-style meal) prepared by "mothers' love" (*ofukuro no aji*), thereby revitalizing traditional family values based on gendered division of labor.[4] In this sense, as sociologist Kimura has argued, the *shokuiku* program epitomized the government's neoliberal initiative to emphasize individual responsibility and moral decision in dietary health and food culture. Considering that this heavy leaning toward such a form of neoliberal traditionalism is one of the main characteristics of the *shokuiku* law, it thus comes as no surprise that the campaigners remained almost voiceless after the 3.11 Great East Japan Earthquake in 2011. Even though the "food safety" issue was high on the *shokuiku* agenda, the 2011 *shokuiku* white book spent only two pages on the topic related to the disaster with little reference to internal exposure or possible radioactive contamination in food and water.[5] Nowhere in the white book or the official program contained politically sensitive issues on the dangers of radioactivity and health risks involved in radioactive contamination of food.

It is such a neoliberal orientation that prompted commentators such as Morimoto Yoshio to assess, in his 2009 book, the government's *shokuiku* program as a "tremendously irresponsible self-responsibility theory" that sought to reinvigorate nostalgia for the postwar social structure represented by the family model with the male breadwinner and female homemaker at its center. Pointing out that the law had

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[3] Ibid, 212; Kimura, Aya Hirata. and M. Nishiyama, "The *Chisan-Chisho* Movement: Japanese Local Food Movement and Its Challenges," *Agriculture and Human Values* 25(2009), 49–64.

[4] Kimura, "Nationalism, Patriarchy, and Moralism"; Kojima Aiko. "Responsibility or right to eat well? Food education (*Shokuiku*) Campaign in Japan." *Stanford journal of East Asian affairs* 11(1) (2011), 48-63.

[5] "Higashinihon daishinsai ni okeru shokuseikatsu ni kansuru jōhō teikyō nit tsuite (Heisei 23 nen ban), *Shokuiku Hakusho* 2011, 104-5.

been co-opting the local level food-agriculture education programs and ecological activisms into its government-led initiative, Morimoto went so far as to call the *Shokuiku* Law the twenty-first century version of the National Mobilization Law (Kokka Sōdōin Hō, 1938-1945) through *shoku* [食 food, or the act of eating].[6] Given that the most intensive and thorough government control ever over food resources and eating habits was realized with the wartime rationing system under the National Mobilization Law, Morimoto's somewhat exaggerated indictment serves as a historical reminder of the state's intervention in its people's everyday lives through the means of daily intake of food.

At the same time, Morimoto's criticism of the contemporary *shokuiku* program involved an attempt to retrieve another aspect of the prewar food movement. He pointed out the self-proclaimed *shokuiku* experts only briefly mentioned that the term *shokuiku* was coined by a military physician Ishizuka Sagen (石塚左玄1851-1909) in the late Meiji period, without explicating what Ishizuka might have meant with his usage of the term. According to him, Ishizuka's ideas could be more appropriately conveyed by a broader term *shokuyō* (食養) or *shokuiku shokuyō* (食育食養), but the government-operated *shokuiku* program merely took the term *shokuiku* to highlight its didactic and moralistic orientation. As though attempting to show the multifaceted nature of the concept, Morimoto also reminded his readers that a food activist and thinker Sakurazawa Yukikazu (桜沢如一1893-1966) was one of the core activists of *shokuyō*, who advanced it into a form of "alternative knowledge" (代替知 *daitaichi*) grounded upon a critical insight into the interrelatedness between environment, *shoku*, and living organisms.[7] It is clear that Morimoto sought to criticize the *Shokuiku* Law

[6] Morimoto Yoshio, *'Shokuiku' hihan josetsu* (Tokyo: Akashi shoten, 2009), 7 and 261.
[7] Ibid, 142-145.

and its conservative food education program by drawing on what he called *shokuyō* and Sakurazawa's perspectives on food, health, and environment.

In hindsight, Morimoto's evocation of *shokuyō* had other postwar precedents by a variety of actors in different historical and geographical contexts. One such individual is a prominent feminist writer and political activist Hiratsuka Raichō. In 1953, she praised the idea of *shokuyō* and its emphasis on "eating right"(*seishoku* 正食) as basic fundamentals of life, without which any social movements to change society and world would be in vain. As a long-term practitioner of Sakurazawa's *genmai*-based dietary regime herself, Hiratsuka summarized the gist of Sakurazawa's ideas as follows: "Eating right is the act of transporting our finite body, with the help of the bridge called food, into the infinite world where we can enjoy freedom, peace and happiness."[8] Hiratsuka considered the problem of eating and food as an essential starting point of changing not only individuals but also societies.[9]

It was not a mere coincidence that what Hiratsuka found in the *shokuyō* program attracted the minds of some young bohemians and students in urban centers of the US, who considered eating habits as part of their counterculture in the late 1960s. Now reframed with a new name "macrobiotics," this dietary program was understood and practiced as a mystical "Oriental" version of ecological vegetarianism in the heyday of student activism.[10] At the same time, the postwar resonance of *shokuyō*'s healthy food program was not limited to macrobiotics. Fukuoka Masanobu,

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[8] Cited in Maruyama Hiroshi, *Maruyama Hiroshi Chosaku-shū 3 kan: Shokuseikatsu no Kihon wo Tou* (Tokyo: Nō-san-gyoson Bunka Kyōkai, 1990), 64.

[9] According to Suzuki Naoko's recent work, even during the wartime period, Hiratsuka was involved in the white rice abolition movement as part of her participation in the urban consumer cooperative movement. Suzuki Naoko, "Hiratsuka Raichō to genmaishoku: shoku, shintai, nashonarizumu," *Shisō* 1118 (2017.6): 108-129.

[10] Warren James Belasco, *Appetite for Change: How the Counterculture Took On the Food Industry* (Ithaca: Cornell University Press, 2007), 54-56. On the popularity of postwar macrobiotics in Japan and the US, Nancy Stalker, "The Globalization of Macrobiotics as Culinary Tourism and Culinary Nostalgia." *Asian Medicine* 5(1) (2009): 1-18.

internationally acclaimed as the pioneer of "natural farming" (*shizen nōhō* 自然農法), shared some of the central tenets of the *shokuyō* movement, "the oneness of the body and soil" (*shindo fuji*身土不二) among others, in advancing his "do-nothing" (no tilling, pesticide/fertilizer-free) organic farming since the mid-1970s. Fukuoka's practice of "natural farming" also included "natural diet," which resonated with the basic tenets of the Meiji *shokuyō* advocates: "follow nature's prescription by selecting seasonal foods from their immediate area."[11]

In such a manner, whether it is combined with a peace movement, a consumer movement, a critique of modern biomedicine, organic farming, or an environmental movement at each historical conjuncture, the concept of food or the act of eating has been highlighted as a critical moment at which mediation between the human body and its surroundings occurs. This organicist perspective on life and environment, which was at times extended to encompass society in general, has often been adopted by political positions against the inexorable advance of the postwar industrialization and its disastrous effect on living organisms. Former Osaka University Medical School professor, Maruyama Hiroshi, plainly exemplifies such a tendency. With his keen mind for the public role of medicine, Maruyama revisited the Morinaga arsenic milk-poisoning incident fourteen years after the catastrophe. His 1969 survey report on the long-lasting sufferings of the victims sparked public interest in the incident. As the prewar *shokuyō* movement had emphasized, Maruyama too adhered to the centrality of food in maintaining the well-being of individuals and society, and thus

[11] Fukuoka Masanobu, *The One-Straw Revolution: An Introduction to Natural Farming,* trans. Larry Korn (Emmaus, PA: Rodale Press, 1978), 128. After working as a plant pathologist at the Kōchi Prefecture Agricultural Experimental Station, Fukuoka returned to his hometown in Ehime Prefecture for farming in the late 1930s. Forty years of experience in natural farming, or no-till farming led him to move on to educational and writing activities from the 1970s onwards. His book *Shizen Nōhō: Wara Ippon no Kakumei* (Tokyo: Hakujusha, 1975) was translated into more than ten languages. The English translation was first published in 1978 and its recent print includes Introduction by Frances Moore Lappé and Preface by Wendell Berry.

sought to find a solution to modern health crises by means of tackling food-related environmental and medical issues. It is noteworthy that in his writings, Maruyama often credited his ideas to Sakurazawa with the latter's early warnings about potential health risks of processed foods as well as interest in holistic medicine.[12]

These postwar traces of the *shokuyō* ideas and Sakurazawa's macrobiotics appear to provide a solid counterpoint to the hegemonic ordering of life, commodity, and agriculture, especially the realms conditioned by global capitalism and resultant environmental degradation. However, reading the prewar history of the *shokuyō* movement forces us to face a series of complex and disturbing aspects of these holistic ideas centered on "eating right." Unlike its postwar image of environmental pacifism, the prewar writings by the ecological and holistic *shokuyō* advocates were no different from their contemporaries who sought to contribute to the ever-expanding Japanese Empire. The postwar successors of the movement often tried to associate Sakurazawa Yukikazu's anti-Vietnam War attitude in the 1960s with his prewar "antiwar" movement and the subsequent imprisonment in 1945.[13] However, any close reading of Sakurazawa's wartime publications will not overlook the many pages filled with rhetoric in support of the Japanese Imperial War (*kōsen*) for the sake of creating a new world order, not to mention the equally frequent assertions made by Sakurazawa of the racial and cultural supremacy of the Japanese. Any reader of Sakurazawa's works will also notice his applauding of Adolf Hitler and Walther Darre in the early 1940s, as well as his endorsement of the Third Reich's blood and soil ideology as the German

[12] On the Morinaga arsenic milk-poisoning incident, see Jun Ui, ed., *Industrial Pollution in Japan*, (Tokyo, Japan: United Nations University Press, 1992), chapter 3. Maruyama's investigation into the food pollution and health issues of the time, in fact, paralleled his exploration of Ayurvedic medicine as a source of holistic medical traditions. On the same year of 1969, Maruyama embarked on the research and propagation of Ayurveda by establishing the Ayurveda Study Group in Osaka (*Ayurveda kenkyūkai*) upon returning from his short survey trip to India. On Maruyama's two-fold project on food pollution and Ayurveda, see Maruyama, *Maruyama Hiroshi Chosaku-shū 3 kan*, 57-65.

[13] Matsumoto Ichirō, *Shokuseikatsu no kakumeiji* (Tokyo: Chisan shuppan, 1976), 71-76.

counterpart to his *shindo fuji* (the oneness of the body and soil) principle. As will be demonstrated in Chapter Four, the principle of *shindo fuji* was at the heart of the *shokuyō* tenets throughout its activities, and the wartime period was *shokuyō*'s heyday rather than its oppression as postwar supporters tend to assert. In this sense, the overused narrative of wartime "conversion (*tenkō*)" forced by the militarist fascist regime seems inadequate and unpersuasive in the case of Sakurazawa, and it may be more accurate to describe him as a radical rightist rather than an antiwar pacifist before 1945.

This dissertation delves into this flip side of the *shokuyō* movement in prewar Japan. Broadly, the movement was centered on the concepts of "eating right (*seishoku*)" and "nature (*shizen*)," and championed a brown rice-centered largely vegetarian regimen as the traditional and healthy diet. With its wide-ranging trajectory of developments and appropriations in the postwar context in mind, my narrative revisits the prewar genealogy of the *shokuyō* and *shokuiku* movement and its relation to the formation and expansion of the Japanese Empire. As such, the most recent version of its retrieval, the *Shokuiku* Law of 2005, timely posed the vexing question anew: what political and ideological implications are embedded in food campaigns at different historical conjunctures? Why and how did the claims on certain foodways and dietary regime become heavily laden with moralistic, regulative and reformative connotations? How did modern scientific imagination come into play here particularly regarding the conceptions of the body and mind, health and medicine, as well as nature and traditions? Hence, by historicizing the emergence and evolution of the *shokuyō* ideas, this dissertation probes the complex relationships between medical/ecological holism and cultural nationalism (or imperial nationalism) exemplified in the case of the *shokuyō* movement in prewar Japan.

In the course of my investigation, each chapter will directly or indirectly engage with the following two fundamental issues. First of all, my discussion in the following chapters strives to illuminate the *shokuyō* movement between the late Meiji and the end of World War II as one striking instance of "invented traditions" in modern Japanese context. Historians of Japan have already employed Hobsbawm's famous formulation of "the invention of tradition" to investigate a variety of cultural practices and concepts in a way conducive to Japan's modernization project.[14] Like the invention of the feature of harmony *wa* or regional identities like *Shinano*, *shokuyō* also had a strong dimension of traditionalizing its assertions. In fact, the term *shokuyō* is a good case in point. As an the abbreviation of the traditional concept, *shokuyōjō* (食養生), which refers to a variety of techniques for self-cultivation and prolonging of life and vitality by means of dietary regimens, *shokuyō* advocates championed *genmai* (brown rice) eating above else, claiming that it is an old and primordial staple food suitable for the Japanese. As will be demonstrated in Chapter One, I argue that the invention of so-called "grainism" (*kokumotsushugi*) as a righteous and desirable food for the "sound minds and bodies" of the Japanese was a reaction to the post-Hibiya Riots social turmoil to create the self-regulative embodied subject through changing the daily diet.

Nonetheless, even though the *shokuyō* campaign eventually offered *genmai* ideology as a means to ameliorate social conflict in accordance with the official family-state ideology, it would be inaccurate to make the teleological assumption that *shokuyō*'s traditionalism contributed to the state's modernization endeavors. On the contrary, precisely because the movement upheld traditionalist perspectives on the

[14] Eric Hobsbawm, "Introduction: Inventing Traditions," in *The Invention of Tradition,* Eric J. Hobsbawm and Terence O. Ranger, eds. (Cambridge: Cambridge University Press, 1983), 1-14; Stephen Vlastos ed. *Mirror of Modernity: Invented Traditions of Modern Japan* (Berkeley: University of California Press, 1998).

issue of eating, body and mind, and also because it maintained a somewhat ambivalent relationship with newly established modern biomedicine, *shokuyō* tenets were increasingly marginalized in mainstream medical discourse. Furthermore, my discussion of the *shokuyō* movement as an example of invented tradition seeks to avoid falling into the trap of interpreting invented traditions as symptoms of Japanese particularity, which is often regarded as a sign of either impeder or promoter of modernity. Rather, my discussion aims to complicate how traditionalism functioned and was refashioned at each historical juncture.

The second central issue concerns the aspect of embodied experience of health and healing placed at the center of the ideological mechanism of the *shokuyō* campaign. Food and foodways can be a carrier of diverse cultural meanings and a source of authenticity, and my discussion in this dissertation touches upon these elements as well. However, my narrative focuses on discussing certain foods or regimens in relation to the health effects ascribed to them. As the title "Food as Medicine" implies, the *shokuyō* movement first emerged in the domain of health and hygiene, and because of this, its relation to modern biomedicine was crucial. My dissertation argues that the ideological strength and resilience of *shokuyō* tenets can be found in its participants' firsthand embodied experiences, especially the allegedly dramatic changes of their bodies and minds. This does not, of course, mean that my discussion endorses *shokuyō* advocates' health claims regarding specific regimens' or foods' medicinal efficacy. These issues are beyond my capability to discuss nor do they form any topic for consideration in this dissertation. On the contrary, my emphasis on bodily experience and awareness is a tool to explore how ideologies work beyond the realm of logical persuasions for its participants. At the center of the active *shokuyō* participants' narrative was the curing experience through changing their diet, which enabled them to make an association between the concepts of health and truth.

In other words, after going through an unexpected and often dramatic healing experience, the advocates came to view food choices in terms of truth or non-truth, or the right or wrong, which was readily interpreted as a strong allegiance to the tenets of *shokuyō*.

That being said, the *shokuyō*, or "eating right" campaign, and medico-social concepts regarding appropriate eating did not remain in the realm of military and medical professionals particularly from the interwar period onward. As this dissertation will show, the *shokuyō* movement influenced a wider spectrum of individuals, including educators, bureaucrats, and artists, in addition to the members of the general public. In spite of its wide-ranging effects, the *shokuyō* campaign's practical and ideological effects have rarely been the subjects of academic research both in English and Japanese scholarship. Due to its proximity to everyday living, the majority of writings on *shokuyō* or macrobiotics has been produced by the sympathizers or practitioners of *shokuyō* themselves.[15] These works, although informative as guidebooks, often lack historical contextualization and critical perspectives for analysis. In contrast to these earlier practical tips and biographic writings on the topic, a handful of scholars, especially in religious studies, have recently analyzed the movement as a form of alternative medical knowledge and practice anchored in the charisma of individual movement leaders.[16] Against this

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[15] Matsumoto, Ichirō. Shokuseikatsu no kakumeiji. Tokyo: Chisan shuppan,1976; Ōta Ryū, *Nihon no shoku kakumeikatachi* (Tōkyō: Shibata Shoten, 1984); Aihara, Herman, *Basic Macrobiotics* (Tokyo: Japan Publications, 1985); Kushi Michio, *The Book of Macrobiotics: The Universal Way of Health and Happiness* (Tokyo: Japan Publications, 1977).

[16] Shimazono Susumu, *"Iyasu chi" no keifu: kagaku to shūkyō no hazama* (Tōkyō: Yoshikawa Kōbunkan, 2003); Tanabe Shintaro eds. *Iyashi o ikita hitobito: kindai chi no orutanatibu* (Tokyo: Senshu Daigaku Shuppankyoku, 1999); Ronald E. Kotzsch, *Macrobiotics: Yesterday and Today* (Tokyo: Japan Publications, Inc, 1985); Namimatsu Nobuhisa, "Kindai nihon ni okeru shokuyōron no tentai," *Kyōto Sangyō Daigaku Nihonbunka Kenkyujo Kiyō* 20 (2015.3): 208-122; Sato Makoto, "Meijiki No Shokuiku Undo: 'Shokuyō Shinbun' to Teikoku Shokuikukai," *The Journal of Economics* (Hokkai-Gakuen University) 57, no. 3 (December 2009): 87–96.

paradigmatic approach to *shokuyō*, this dissertation looks at this health-food movement as a distinct intellectual and social phenomenon beyond the narrow focus on a couple of individual movement leaders. My discussion probes into the questions of why and how this stream of dietary reform campaigns emerged at specific points in time. In addition, I attempt to analyze the role the movement took in the process of modern transformation of the society, particularly in relation to the dominant discourse and institution of health, hygiene, and nation.

Chapter One traces how the food crusade started as a conservative moral and social reform program among upper class elites and medical professionals in the immediate wake of the Russo-Japanese War (1904-5). The chapter centers on Ishizuka Sagen's chemical balance theory, which appealed to ruling elites by presenting itself as a scientific re-interpretation of old foodways. Although the main supporters were initially limited to medical professionals, military personnel, bureaucrats and entrepreneurs, it was not long before the regimen attracted increasingly health-conscious middle class enthusiasts throughout the interwar period. As I will show, with industrialization and urbanization massively transforming Japanese society, the way to understand the relationship between food and health predominantly came to rely on scientific medical frameworks and experimental nutritional research.

Chapter Two takes a step back and looks at how the issues of "efficiency" and "rationalization" came to the foreground of nutrition science and physiology, in the process of which the concept of earlier *shokuyō* was overtaken by that of *eiyō* (nutrition). The mid-1910s inflation and the subsequent outbreak of the Rice Riots of 1918 engendered the widespread perception that the food problem (*shokuryō mondai*) was a social security issue which threatened social stability if left unresolved. Thus, in a bid to curb similar social incidents from occurring in the future, the post-Riots institutionalization of nutrition science brought together the two fields of economic

efficiency and nutritional efficiency in order to address the concerns of rising food prices. As I will demonstrate in my chapter, this institutionalization of nutrition science allowed for the development of a new form of laboratory-based knowledge in the study of food and health centering on the concept of *eiyō* (or nutrition), in which meticulous calculations of optimum combination of nutrients, calorie, and budget were required and promoted.

At the same time, the *shokuyō*'s "eating right" campaign evolved toward another direction by increasingly drawing on a "natural, holistic, and monistic" perspectives as well as by emphasizing the interconnectedness of food, the human mind and body, and the soil. I discuss this direction in more detail in Chapter Three, which focuses on Sakurazawa Yukikazu's reformulation of *shokuyō* theory through his translation work and intellectual exchanges with French holistic medicine movements. Through his endeavors, the *shokuyō* movement culminated with his ecological and holistic "Natural Medicine (*shizen igaku*)" based on the yin-yang theory, which was to allegedly resolve the dilemmas of modern Western medicine. In particular, my analysis illuminates how Sakurazawa attempted to assign such a particularistic claim on the Japanese spirit and Shinto to the core concepts of Natural Medicine, while also asserting that these same particularistic aspects work as forms of knowledge universal to all nations. In such a way, I seek to highlight Sakurazawa's contribution to the universalistic ideology of the expanding Empire.

Chapters Four and Five discuss how the *shokuyō* tenets were applied in specific food issues during the wartime period. Chapter Four traces the history of staple food reforms promoted mainly by both military personnel and medical experts to address the growing issue of food security in the face of total war. I show how despite the disagreements in claims on the optimal type of rice for national consumption, the questioning of nutritional and economic efficiency of *hakumai* (or

white polished rice) was a consistent and concerted criticism by these participants. By focusing on the hitherto under-explained *genmai* adoption measure in late 1942, Chapter Four thus demonstrates how *genmai* eating became a focal point of conflicting dietary reform initiatives to better prepare for total war. In order to show the complexity of the *genmai* movement, I also analyze another *shokuyō* advocate Futaki Kenzō and his followers' intervention in the wartime standardization of *genmai*. By analyzing Futaki's writings, I hope to show how he offers a new perspective on individuals' embodied healing experience as a formative moment of envisioning a new society through changing daily foods.

While the *shokuyō* backers generally praised unpolished rice as an ideal food, they denounced one of the most problematic "modern" items, sugar. Chapter Five examines a *shokuyō* crusade against refined sugar consumption in Japanese migrants' diet in Manchuria. With the expansion of the Empire after the outbreak of the Second Sino-Japanese War, the principle of *shindo fuji* needed to be further explicated for the Japanese expatriating to Manchuria, China, and Southeast Asia. Now re-interpreted as "obedience to Mother Nature" for nurturing robust bodies, the *shindo fuji* principle was more emphasized by Sakurazawa Yukikazu as a success strategy for the Japanese settlers. Driven by a sense of crisis that Japanese settlers are unhealthier than any other races, Ōkohira Takamitsu, a former South Manchuria Railway employee, made a *shokuyō* campaign trips to settlers' communities in remote areas in Manchuria in order to help improve Japanese settlers' adaptability in a new environment.

By drawing on a wide range of archival sources ranging from medical journals to popular cookbooks, this dissertation offers a critical account of the prewar *shokuyō* movement and its cultural, ideological, and political implications. In so doing, this dissertation ultimately investigates how this "traditionalist" and "holistic" dietary

persuasion fed into a cultural nationalist political imagination grounded in a critical understanding of the body, health, and environment.

CHAPTER ONE

DIGESTING MODERNITY, HEALING WITH NATURE: THE BIRTH OF A "NATURAL" FOOD MOVEMENT IN THE LATE MEIJI PERIOD

On October 17th, 1907, roughly three hundred people gathered for an event at the Tokiwagi club in the Nihonbashi district of Tokyo. The participants included a gamut of elites, ranging from members of House of Peers and Representatives, physicians, dentists, lawyers, to high-ranking army and navy officers. The purpose of the event was to celebrate the establishment of the Chemical Diet Association (*Kagakuteki Shokuyōkai* 化学的食養会, The Shokuyō Association hereafter), the first society formed in Japan for the purpose of promoting a healthful "natural" diet for the Japanese. At the center of the *Shokuyō* Association was Ishizuka Sagen (石塚左玄1851-1909), a retired army pharmacist who created the conceptual framework of *shokuyō*. Even though the Association lasted beyond Ishizuka's death in 1909, and its activities peaked under the leadership of Sakurazawa Yukikazu (桜沢如一1893-1966) during the wartime period in the 1930s-1940s, the organization practically dissolved in the last years of the Asia-Pacific War. Even the term *shokuyō* itself seemed to have disappeared from everyday Japanese vocabulary.

This chapter elucidates the emergence and evolution of the idea and practice of *shokuyō* in relation to the problem of modernity by complicating the changing notions of health, the relationship of body and mind, and civil morality. I analyze what it meant to be eating "naturally" and "right," and how "natural" and "traditional" foodways were presented as a healthful way of eating in turn-of-the-twentieth-century Japan. In order to understand the modifier "chemical" added to the *shokuyō* regimen and its relationship to "natural," it is essential to situate the emergence of this movement within the historical context of the late Meiji discourse on health, cultural

authority, and the political project of civilization and enlightenment. I will argue that this dietary reform movement loosely related to the concept of *shokuyō*—as was the case in the Shokuyō Association—was a reaction to the changes brought about by rapid modernization and Westernization in the spheres of lifestyle, scientific authenticity, as well as cultural values. By historicizing the movement's focal principles surrounding the concepts of nature, tradition, and Japaneseness, this chapter analyzes how the movement sought to strategically create a new revivalist regime of "eating right" in order to intervene in the rapidly modernizing milieu.

Yōjō as a Late Meiji Ideology

The rise of modern public hygiene has been one of the major themes in the history of health and medicine in Japan. The existing historical accounts, even with their different analytical foci agree on the fact that the new concept of public hygiene was introduced and put into practice as an essential part of the Meiji government's modernization initiatives.[1] This point has been exemplified with Nagayo Sensai (長与専斎1838-1902), a physician bureaucrat who was in charge of establishing a new public hygiene bureau in the Meiji government. During the famous diplomatic journey around the world as a member of the Iwakura mission in 1871, Nagayo found an ideal model of public hygiene in Germany, among other European countries, where he witnessed the government and physicians playing a central role in regulating and promoting its people's health at the administrative level. In order to introduce this new knowledge, he adopted the term *eisei* (衛生) from the Daoist text *Zhuangzi* as a new Japanese translation of German *Gesundheitspflege* (health care), or sanitation or

[1] Susan L. Burns, "Constructing the National Body: Public Health and the Nation in Nineteenth-Century Japan," in *Nation Work: Asian Elites and National Identities*, ed. Timothy Brook et al. (Ann Arbor: University of Michigan Press, 2000); Ruth Rogaski, "Chapter 5 Transforming *Eisei* in Meiji Japan," in *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China* (Berkeley: University of California Press, 2004).

hygiene in English of its late nineteenth-century sense, in an attempt to convey the meaning of modern hygienic systems as in the United States and European countries.[2] By using the term *eisei*, which literally means "guarding or policing life," Nagayo sought to infuse into the term the sense of administering life of the entire population that would eventually contribute to the wealth and power of the state.

According to historian Ruth Rogaski, although Nagayo's reformulation of the term *eisei* drew on the old Daoist tradition, he emphasized its meaning as "hygienic modernity," which was deemed crucial to radically transforming the society into a powerful modern nation state. By the time when Japan terminated its unequal treaties with Western powers in 1899, Japan not only recovered its right to quarantine foreign ships at the ports but also established colonial regulations for port inspection in Taiwan. These actions signaled Japan's emergence as an imperial power, Rogaski argues, and differentiated Japan from other Asian neighbors, especially China, by successfully demonstrating Japan's capacity to control diseases and administer moving populations. When the cholera epidemic of 1895 hit Tianjin, modernizing Chinese elites still understood the disease in Chinese physiological idioms such as excessive yin nature in the body, and the prevention of the disease was entirely the business of the individual. For the same epidemic, Japanese medical personnel, by contrast, took a series of public hygienic measures with particular focus on disinfection and quarantine, which was based on the bacteriological understanding of cholera.[3]

Rogaski also stresses that these strikingly different views on the etiology and treatment of cholera of 1895 held by Chinese and Japanese elites offer a critical clue to understanding the huge gap in the meaning and usage between the Chinese term *weisheng* and Meiji's *eisei*, both written with the same Chinese characters. That is to

[2] Rogaski, *Hygienic Modernity*, 144-145.
[3] Ibid, 160-163.

say, for Rogaski, this gap was a marker of how far each country successfully underwent modern transformations in the process of which the concept and techniques of new public hygiene were expected to play a central role. In her discussion of Chinese *weisheng* and Japanese *eisei*, therefore, the former was doomed to follow the trajectory of the latter, in the process of which the meaning of *weisheng* approached the modern hygiene models of Japan and other European powers of the time. In this context constructed by Rogaski, the concept of Japanese *eisei* appears to have little room for debate and seems to offer an exemplary model of the swift establishment of the modern hygiene system.

However, at least until the end of the nineteenth century, the term *eisei* carried a more complex and broader connotation in Japan, even as used by the modernizing bureaucrats and physicians. In his short essay "On the Misunderstanding of *Eisei* (1883)," Nagayo Sensai tried to re-clarify the meaning of *eisei* circulated at the time. His target of criticism was not so much the inadequacy of systemized hygienic measures, nor the persistence of traditional notions on health and disease. Rather, Nagayo warned against the tendency to understand *eisei* as the pursuit of life in ease and comfort or the enjoyment of convenience and luxury. He enumerated the examples of common misunderstandings of *eisei* such as "a young and robust person wrapping up in a thick blanket, wearing glasses, taking milk, eggs, animal meat," or "a healthy grown-up eating recovery foods for children as a source of nourishment."[4] The essence of *eisei*, Nagayo insisted, lay instead in helping oneself build physical and mental resilience in the face of hardship and adversity to the extent that one could even remain spirited and determined "without sleep and eating for three days and

[4] Nagai Sensai, "Eisei gokai no ben," *Dainihon Shiritsu Eiseikai Zasshi* 2 (1883), 35. Cited in Takizawa Toshiyuki, *Kenkō bunkaron* (Tokyo: Taishūkan Shoen, 1998), 61.

nights." This was what he regarded as the principle of personal hygiene, or *kakuji eisei,* which conformed to the "spirit of the warrior" (*bushido*).[5]

Considering that Nagayo Sensai was the pioneer of modern public hygiene who established the central hygienic system, it may seem odd that he placed such a strong emphasis on individual ethos in order to explain the rightful meaning of *eisei*. Interestingly, the idioms and concepts Nagayo employed to clarify the meaning of *eisei* do bear a close resemblance to that of *yōjō* (*yangsheng* 養生), the art of self-cultivation and prolonging life.[6] As a central concept regarding maintaining health in East Asian traditions, the practice and idea of *yōjō* was, in fact, one of the major components of the broader Meiji discourse on health and hygiene. The term *yōjō* was being used interchangeably with the term *eisei* to refer to a variety of practices for maintaining individuals' health. The publication of the *yōjō* manuals continued during the Meiji period, and included every aspect of life that affects individual's well-being, such as diet, medicine, breathing, exercise, sex, sleep, clothing, and bathing. This emphasis on the relation between daily aspects of living and general health was often articulated in combination with new *eisei* knowledge and theories of miasma and bacteria.

In this sense, the Meiji elites deemed the notion of *yōjō* to be a valuable cultural resource to propagate the relatively new hygienic discourse, *eisei*. The establishment of The Japanese Association of Private Hygiene (Dainihon Shiritsu Eisei Kyōkai, Eisei Association hereafter) of 1883 remarkably exemplified this aspect.

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[5] Ibid, 61.

[6] It has been said that the concept of *yōjō* arose during the Warring States Period in China (475-221 BCE) and developed under the strong influence of Daoist art of nurturing life and vitality. The books on the art of *yōjō* were widely authored and circulated in late Tokugawa period, especially during the first half of the nineteenth century, at a time when Dutch medical texts were widely read and applied among medical practitioners. For a comprehensive overview of *yōjō* during the Tokugawa period, see Takizawa Toshiyuki, *Yōjōron no Shisō* (Yokohama : Seori Shobō, 2003).

The leading public hygiene-related bureaucrats and military personnel including Gotō Shimpei and Nagayo Sensai founded the Eisei Association in order to publicize the importance of *eisei* as well as to spread practical suggestions to the general public. To this end, the Association often held lectures open to everyone. At one of these lectures for the Eisei Association, Fukuzawa Yukichi stressed that the new principles of *eisei* should not forcefully implement Westernization, but respect and appropriate "old customs and habits" as long as they do not violate scholarly accuracy.[7] The Eisei Association's local lecture series were carried out all over Japan, and delivered new knowledge about infectious diseases, childcare, night soil, nutrition and food, and new tools and technologies to improve health by unreservedly using the idioms of and allusions to the "old customs" of *yōjō*. On the institutional and policy level, the new system of modern public hygiene of *eisei* was gradually integrated into policing and coercive measures on the one hand, particularly in the course of controlling the cholera disease in the 1870s.[8] On the other, the propagation of *eisei* into the details of everyday life at the individual level relied mostly on the traditional language of *yōjō* as its vehicle.

Yet, what is important here is not so much the appropriation of the language of *yōjō* in service of *eisei* as the modern transformation in the meaning of health in general. When Nagayo Sensai spoke of the warrior spirit or personal hygiene, every individual's health was actually conceived from the perspective of the whole population's health. In other words, even though the concept of *yōjō* seems to be confined to the seclusive realm of the individual, it began to be considered as a means to ultimately achieve public hygiene, which would eventually contribute to public

[7] Takizawa Toshiyuki, *Kenkō bunkaron*, 63.
[8] Throughout the Meiji period, whenever the authorities' put efforts to enforce quarantine and investigation to stop the spread of cholera, popular violence broke out. In Okayama and Chiba prefectures, for example, the villagers attacked and even killed police and physicians in 1877. Susan L. Burns, "Constructing the National Body," 27.

good. Behind this assumption on the inevitable connectedness between personal and public health was a shift in the understanding of the meaning of health among the Meiji elite intellectuals. For instance, Nishi Amane (西周, 1829-1897), the influential philosopher and fervent advocate of enlightenment during the early Meiji period, once put forth the idea that health (*kenkō*), along with knowledge and wealth, is one of the greatest treasures in life. Nishi understood pursuing one's health as an individual's natural right, and under the influence of utilitarianism, he considered that the pursuit of the individual interest would eventually lead to the greater public interest.[9] This perspective on the body and health in relation to common good was shared not only by state-centered bureaucrats but also by the intellectuals who were involved in the freedom and people's rights movement. In this sense, Nagayo's clarification of the meaning of *eisei* in terms of the mindset and lifestyle akin to *samurai* warriors needs to be understood as a means to bring prosperity to the whole society of the newly established nation-state. Here, the notion of population had already been introduced, and the issue of health for the society thus came to be redefined as the overlapping of these new techniques of *eisei* and the old practices of *yōjō*.

Mori Ōgai(森鴎外, 1862-1922)'s emphasis on administrative and institutional aspect of public health, in this sense, can be read as a sign of the health discourse increasingly being divided into *eisei* and *yōjō*, rather than the vanishing of the latter. As another leading figure in the promotion of modern public hygiene, Mori used the famous formulation of the study of *eisei* as "an economics (*keizaigaku*) of promoting health."[10] Unlike his predecessor Nagayo Sensai, Mori tried to conceptually differentiate the traditional art of nurturing life, *yōjō*, and modern economics of health, *eisei*. He considered that the traditional manuals for *yōjō* written under the influence of

[9] Kano Masanao, *Kenkōkan ni miru kindai* (Tōkyō: Asahi shinbunsha, 2001), 10-12.
[10] Mori Ōgai, "Eiseigaku Tai'i," *Ōgai Zenshū* 30, 156.

Daoism would not be very helpful for the enterprise related to public hygiene because the current society required a series of new techniques and knowledge to solve the problems. As the society moved toward industrialization and urbanization, the language of *yōjō* deemed inadequate for addressing a variety of societal problems that arose from the changed living environment. Mori argued that the art of *yōjō* could be useful for a person who wishes to become a hermit living in a remote place, but now the society requires the art of prolonging the lives of the "densely populated people." To this end, Mori stressed, the new study of public hygiene, *eisei*, should be based on systematic knowledge such as natural science, chemistry, and statistics.[11]

Indeed, around the turn of the century the ambiguity of *eisei* gradually faded away, and the meanings of the body, health, and disease irrefutably clustered around the concept of *eisei* in the sense of public health administration centering around biomedicine. *Yōjō* was less often discussed in this sense than it was used to during the early Meiji period, as demonstrated by Mori's straightforward dismissal of the concept. Nonetheless, the discussion of *yōjō* was still, if not more frequently, articulated in regard to another increasingly important domain of health: individuals' minds and ethos. In other words, as *eisei* came to predominate the discourse of public health in general, what was highlighted in the idea of *yōjō* were the element of Confucian morality and its role in harnessing the body for the purpose of maintaining good health and personal hygiene.

No case is more emblematic of this transition than the rise of the moral education called *shūshin* (修身), which literally means, "self-cultivation" or "self-discipline," as a core school subject in the secondary educational system. The early Meiji public education programs in the 1870s took pubic hygienic instructions seriously and thus included substantial amount of oral education on health and hygiene

[11] Ibid, 157.

in the regular curriculum. The Revised Education Law in 1880, however, put an end to this tendency. The independent curriculum of oral instruction on private hygiene and physiological knowledge was abolished; instead, moral education through the subject of *shūshin* took over with a new focus on morality and self-disciplining, rather than physiological knowledge.[12]

The notion of *yōjō*, in this context, was also appropriated into the language of moral education of *shūshin*. Kaibara Ekiken (1630-1714)'s *Yōjōkun*, one of the numerous popular health manuals during the Tokugawa period, became one of the most favored sources in the government-issued *shūshin* textbooks. The textbooks particularly highlighted Confucian elements from *Yōjōkun* by dictating that the body is a gift (*mitamamono*) from one's parents, so that everyone should treasure their bodies and maintain their health.[13] In other words, the meaning of nurturing life (*yōjō*) and keeping healthy was interpreted as a means of fulfilling filial piety, which in association with loyalty toward the emperor constituted the mainstay of the late Meiji family-state ideology. This canonizing process of *Yōjōkun* demonstrated that the concept of *yōjō*, once synonymously used with *eisei*, gained the powerful connotation of civil morality and self-disciplining on an individual level. Understanding these changing implications of *eisei* and *yōjō* in the broader late Meiji context provides important clues as to the emergence of *shokuyōjō* (食養生)—*yōjō* in terms of eating (*shoku*)—in the following sections.

Ishizuka Sagen (1851-1909)

Ishizuka Sagen was born in 1851 in Echizen province (part of Fukui Prefecture today). His grandfather and father were Sino-Japanese (*Kanpō*) medical practitioners,

[12] Shinmura Taku, *Kenkō no shakaishi: yōjō, eisei kara kenkō zōshin e* (Tōkyō: Hōsei Daigaku Shuppankyoku, 2006), 209-219.
[13] Ibid.

but Ishizuka himself did not receive any formal education in medicine. At the age of seventeen, he was hired as a technical assistant at the Fukui Medical School and later at the Chemistry Bureau of South Branch School of University (*Daigaku Nankō*, later Tokyo Imperial University) between 1868 and 1872. During this time period he familiarized himself with western languages such as Dutch, German, French and English as well as with some knowledge on pharmaceutics and chemistry through books written in Dutch (*Rangaku* texts). After obtaining certificates in clinical medicine and pharmacy in 1873, he briefly served in the medical bureau of the Ministry of Education before beginning a long career with the Japanese Imperial Army.[14] Participating in the Seinan (1877) and Sino-Japanese Wars (1894-5), he held the vocation of a military pharmacist with the Imperial Army before he was eventually discharged in 1896 with a high-ranking position in a pharmaceutical corps. From then till his death in 1909, Ishizuka devoted himself to practicing and writing about his unique dietary program called "the chemical diet for nurturing life (*kagakuteki shokuyō*)."

The most influential publications by Ishizuka were *Kagakuteki Shokuyō Chōjuron (A Treatise on Chemical Diet for Nurturing Life and Longevity*, 1896, *Chōjuron* hereafter) and *Shokumotsu Yōjōhō: Kagakuteki Shokuyō Taishinron* (*The Principles of Nurturing Life Through Food: the Chemical Theory of Nurturing Body And Mind,* 1898, *Taishinron* hereafter).[15] In his voluminous book, *Chōjuron,* Ishizuka put forward the novel theory on the chemical diet based on his more than twenty years of clinical experience in the Imperial Army. Two years later in *Taishinron,* he summarized the main points of *Chōjuron* in a more readable style aimed at a more general readership.

[14] Sakurazawa Yukikazu, *Ishizuka Sagen: denki* (Tōkyō: Ōzorasha, 1994).
[15] Ishizuka Sagen, *Kagakuteki Shokuyō Chōjuron* (Tokyo: Hakubunkan, 1896); Ishizuka Sagen, *Shokumotsu Yojōhō: Kagakuteki Shokuyō Taishinron* (Tokyo: Hakubunkan, 1898).

The gist of his "chemical diet for nurturing life (*kagakuteki shokuyō*)" can be found in his focused attention to the functions of minerals in digestion and metabolism. The introduction of *Chōjuron* starts with a critique of the medical discourse of the time. In it, Ishizuka asserts that even though inorganic compounds such as salt play essential roles in the human body, most scholars were entirely dismissive of the functions of minerals while merely focusing on combustible organic compounds such as protein, fat and starch.[16]

In the meantime, the feature of Ishizuka's treatise not only laid in his unusual interest in the importance of minerals in general, but the way he comprehended the interactions between the two specific minerals: potassium (with chemical symbol K) and sodium (with symbol Na). He explained that even though potassium and sodium, both having alkali properties, appear very similar to each other, their chemical properties and the ways both compounds constitute salts are not only entirely different but also antagonistic: potassium tends to absorb moisture and oxygen, while sodium tends to dehydrate the substance it contains in it. Furthermore, what Ishizuka assumed was that these properties persist when humans ingest the food retaining these two elements. That is to say, if one takes potassium-rich food, the compound leads to the expansion, softening and disintegration of the body. In contrast, when one takes in sodium-rich food, it dehydrates body organs, thereby causing enervation and indigestion. Thus, Ishizuka claimed, if one properly wedded potassium-rich food with sodium-rich food, potassium's tendency for expansion and disintegration would be counteracted by the dehydrating and condensing nature of sodium. Therefore, for Ishizuka, the crucial point is how to maintain the state of equilibrium. To this end, he conclusively claimed that one could achieve this state of equilibrium only through regulating the subtle antagonistic functions of the potassium-sodium pair in food

[16] Ishizuka Sagen, *Chōjuron, 3.*

intake. This balance between potassium and sodium, albeit in such minuscule quantities, was deemed an ultimate ideal of a healthy diet.[17]

Ingredient	Sources	Percentage of Potassium in food	Percentage of Sodium in food	Potassium to Sodium ratio
Kompu (Hokkaido)	K	0.37	0.55	0.67 : 1
Egg	A	0.16	0.21	0.76 : 1
Polished rice	E	0.21	0.11	1.91 : 1
Tea leaves	O	0.17	0.05	3.30 : 1
Beef	N	-	-	3.37 : 1
Salmon (river)	O	0.80	0.27	2.44 : 1
Daikon	N	0.51	0.15	3.40 : 1
Beer	E	0.73	0.19	3.84 : 1
Cucumber	A	0.24	0.06	4.00 : 1
Milk (cow)	A	0.17	0.04	4.25 : 1
Lettuce	A	0.37	0.08	4.62 : 1
Turnip	A	0.28	0.06	4.66 : 1
Eggplant	A	1.90	0.40	4.75 : 1
Brown rice	A	0.20	0.04	5.00 : 1
Pickled plum meat	E	0.65	0.12	5.35 : 1
Millet	A	0.23	0.04	5.75 : 1
Lotus root	A	0.89	0.14	6.36 : 1
Pear	A	0.20	0.03	6.66 : 1
Glutinous rice	A	0.21	0.03	7.00 : 1
Barley	K	0.56	0.06	8.75 : 1
Sweet potato	A	0.35	0.04	8.75 : 1
Wheat	N	-	-	9.36 : 1
Upland rice	A	0.24	0.02	12.18 : 1
Apple	A	0.56	0.04	13.70 : 1

[17] Ishizuka Sagen, "Dai san shō: Shokumotsuchū Fūfu Ajikari no Seishitsuron," *Yakugakuzasshi* 155 (1895), 49-50.

Figure 1. Modified table of potassium-to-sodium ratio from *Kagakuteki Shokuyō Chōjuron* by Ishizuka Sagen (Tokyo: Hakubunkan, 1896), 152-9. Ishizuka did not provide detailed bibliographic information but roughly identified the authors of sources from which he gained the above data as follows. N: Christoph Nothnagel and Waltraud Rosbach's book; E: Eguchi Noboru (江口襄)'s book; K: Edward Kinch; A: a textbook used at Tokyo Noringakko (Tokyo Agricultural and Forestry School); O: The Ministry of Agriculture and Commerce. Ibid, 160.

How then could his theory be translated into food choice in actuality? In chapter 5 of *Chōjuron*, Ishizuka provides a detailed chart for the ratio of K-Na in each food ingredient based on various sources published both in German and Japanese (see Fig.1). By suggesting numeric data available at the time, Ishizuka sought to demonstrate that potassium is abundant in plant-based ingredients such as grains, vegetables and fruits, while sodium is rich in animal-based foods like fish, poultry, meat and dairy. The balanced intake of K-Na in Ishizuka's theory, therefore, called for an appropriate combination of plant-based and animal-based foods.

In addition, Ishizuka's mineral equilibrium is not only concerned the balance in food ingredients, but is also dependent on one's living environment and vocation. According to him, residents in islands or coastlines were required to consume more foods rich in potassium, whereas those living in mainland continents or mountainous areas would have to increase the amount of sodium intake. In contrast, city dwellers tend to have extravagant and rich diets, and therefore, Ishizuka argued, must pay careful attention to taking enough potassium to offset excessive sodium in their bodies. Besides, the degree of physical activity was another variable. The more physical work and exercise one does, the more sodium should be taken, because human bodies lose sodium through perspiration. For the same reason, those who engage in mental work should take less sodium-rich foods since they do not lose sodium through sweating as much as manual workers. This K-Na balance in consideration of one's surroundings was to be used as a key theoretical foundation for

Ishizuka and his supporters' crusade for unpolished *genmai*, or what they called "grainism" (*kokumotsushugi*穀物主義). I will focus on this aspect in the last section.

Based on the characteristics of these two minerals, Ishizuka drew an analogy between these workings of the potassium-sodium pair and those of the male-female sexes. He called potassium "the masculine (or husband) salt," and sodium "the female (or wife) salt," and then associated the relationship of the two with a heterosexual marital relationship. The assumption was that male sex and female sex demonstrate contrasting qualities specific to each sex, so do potassium and sodium; in the same way, male and female sexes interact against each other, so do the two minerals counteract each other. This is the reason why he designated his chemical diet as a "connubial alkali" (*Fūfu Ajikari ron*).[18] All in all, Ishizuka repeatedly stressed the chief regulatory role of the Na-K pair even if there exists very small amounts in our bodies. He likened the two minerals to commanding generals in the army, who despite their small numbers, exercise control over the entire army. Chemical analysis is indispensable, Ishizuka argued, in that the functions of minerals are often otherwise undetectable and subtle. In *Chōjuron*, therefore, he implored contemporary and future scholars, whether in the East or West, to put more effort into the chemical analyses of foodstuff as well as their relation to the human body.

This strong emphasis placed on the methodology of chemical analysis, and a particular attention to the Sodium-Potassium balance, explains why the label "chemical" was attached to his dietary regimen. Furthermore, it also reveals the degree to which Ishizuka departed from the concepts of traditional Sino-Japanese medicine (Kanpō) to which his later followers sought to attribute Ishizuka's regime toward. It

[18] It should be noted that in Ishizuka's writings this yin-yang concept appeared infrequently, and was used, if at all, in a metaphorical sense. In some passages Ishizuka likened male potassium and female sodium to the forces of yang and yin, yet in some other cases he used the terms yin and yang to refer to minerals in general and combustible organic compounds respectively. Ishizuka Sagen, *Chōjuron,* 44 and 3.

can be said that his observation of the properties of minerals was strictly materialist, and he clearly presented potassium and sodium in foods as something objectively measurable in numerical values. It is clear that Ishizuka used the principle of yin-yang merely as an analogy when explaining the antagonistic functions of potassium and sodium, and that he did not further employ other major concepts from Sino-Japanese medicine, which at that moment in time, relied on complicated interplay of a series of key concepts such as *qi*, blood, essence and spirit. Moreover, even though Ishizuka implied that the concept of food as medicine, or of food over medicine, was often found in East Asian *materia medica* (*honzō*), the ways in which medicinal effects of food treated in traditional medical texts were entirely different.[19] In contrast to the traditional medical framework that not only dealt with the function of yin-yang, but also that of five tastes (sour, bitter, sweet, pungent, and salty) as part of the working of five elements and five internal organs, the *shokuyō* framework spotlighted the specific chemical properties of food ingredients and interpreted them as the notion of yin-yang balance. Such concepts of specific regulative substances representing yin-yang and exclusively playing a determining role in the human body were foreign to the conventional Sino-Japanese medical system. This materialistic understanding of chemical balance could not emerge until chemical analysis of food composition became possible in the nineteenth century. In this sense, the methodology of modern chemistry formed the backbone of the notion of *kagakuteki* (chemical) *shokuyō*.

However, despite Ishizuka's professed adherence to modern chemistry, his chemical *shokuyō* regimen contained the aspects of the relationship between food and human health far beyond the chemical analysis between sodium and potassium. A review of Ishizuka's *Chōjuron*, which appeared in the medical journal *Chūgai Iji Shinpō*, best exemplified the way in which the medical establishment of the time

[19] Mayanagi Makoto, "Ishokudōgen no Shisō: Seiritsu to Tenkai," *Sinica* 9(10) (1998), 72-77.

responded to this complexity within his theory. The review somewhat simplistically summarized Ishizuka's arguments into eight points, exclusively focusing on the qualities and functions of sodium and potassium. Without hiding an undertone of surprise that Ishizuka dealt with contagious diseases such as cholera in relation to the dietary effects of K-Na, the review calmly provided the following concluding comment: "we would like to welcome this novel approach, even though the theory will need to go through scholarly examination and discussion."[20] This brief review is symptomatic of how Ishizuka's theory was received by medical professionals in late Meiji period in the following two senses.

First of all, the reviewer's somewhat reserved, if not suspicious, attitude reveals the fact that Ishizuka's emphasis on minerals and the potassium-sodium pair in human (and animal) diet was seen as a sort of unconventional hypothesis. In fact, this response can be understood as part of the broader trend within the Meiji medical discourse. Around the time Ishizuka advanced his theory, Koch's germ theory had already been introduced and had garnered intellectual power in the fields of both academic and clinical medicine. Although the relation between nutrition and disease was also taken up as an important issue in the course of the fight against the beriberi disease throughout the Meiji period, the examination of the role played by minerals, just as vitamins, had to wait for another decade to be discovered. Rather, physicians and medical institutions, overwhelmed by the contemporary German germ theory, directed more of their attention toward finding out the germs that would presumably cause the beriberi diseases by utilizing the methodologies of laboratory medicine.[21] In this regard, the reviewer's suggestion for "scholarly examination and discussion"

[20] *Chūgai Iji Shinpō* 391 (1896), 56-47.
[21] On the Ōgata Masanori's "discovery" of beriberi germs and its implications in the course of the introduction of scientific medicine in Japan, see Christian Oberländer, "The Rise of Western "Scientific Medicine" in Japan: Bacteriology and Beriberi," in *Building a Modern Japan* (New York: Palgrave Macmillan, 2005), 13-36.

obviously refers to the process of scientific verification through the investigative methods of newly established laboratory experiments. Ishizuka's theory utilized some data from chemical analyses, but the core argument on the antagonistic function between the Na-K pair was mostly based on his knowledge and intuition from empirical experiences and observations. Therefore, in the reviewer's eyes, Ishizuka's methodology was most likely seen as inadequate and dissatisfactory.

More importantly, the second point implied in the review can be drawn from what the reviewer omitted and ignored to mention. The review did not even introduce the term Ishizuka favored, "connubial alkaline theory," and furthermore, completely ignored the aspects that were beyond the chemical and physiological realms, such as the relationships between natural environment, bodily composition and correspondingly proper foods; and the effects of consumption of Na-K on human physiology and psychology.

Indeed, Ishizuka's claims on food and health cannot be exhaustively summarized in terms of chemical diet or connubial theory. Rather, what he envisioned was that food is the most potent way of fashioning people's bodies and minds. This is the reason why Ishizuka audaciously declares that "[h]umans have the liberty to decide the amount and kinds of food to eat. Foods, in turn, have the liberty not merely to determine human body's shape, height, and strength, but also to dictate brilliance, nerve, and the lifespan of the human body and mind (*tai shin*)."[22] Therefore, human intelligence and aptitudes can be improved and adjusted, and even low-minded people have a possibility to nurture "virtuous spirits" through appropriate eating. This was

[22] Ishizuka Sagen, *Taishinron*, 192.

what Ishizuka called *shokuiku shokuyō* (educating and nurturing through eating) through the optimal diet based on chemical principles.[23]

Here it is not difficult to see the confluence of Ishizuka's *shokuyō* and its relation to the art of *yōjō* in Meiji Japan. The term *shokuyō*, though modified by a new term "chemical" (*kagakuteki*), still indicated its characteristic as part of the broader art of nurturing and prolonging life of *yōjō*, which involved more than mere materialist aspect of nutrition. As discussed in the previous section, the Meiji discourse of *yōjō* was gradually departing from the concept of *eisei* and brought near to *shūshin* as self-regulatory practices toward nurturing desirable ethos and healthy bodies at the individual level. Faithfully following ancient sages and Kaibara Ekiken, Ishizuka consistently stressed moderation in eating and drinking and cautioned against the danger of gluttony. The difference Ishizuka brought to the late Meiji discussions of *yōjō* was the dimension of "food determinism" (*shokuhon shugi*) by which he sought to refashion people's minds and bodies simultaneously. In this sense, it comes as no surprise that a newspaper reporter from the prefecture of Aichi described Ishizuka as a "mysterious physician," with mixed feelings of admiration and suspicion, "who is more like a healer of the mind rather than the body."[24]

In order to situate the emergence of this "mysterious physician" within the context of the changing clinical landscape of the time, it is worth taking a look at Ishizuka's activities as a *shokuyō* clinician. After retiring from the Imperial Army in 1896, Ishizuka opened a private clinic where he practiced his theory of chemical diet to the general public. According to a report on the clinic, Ishizuka gave diagnoses based on the characteristics of patient's birth date and place, location of residence,

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[23] Ishizuka Sagen, Ibid. Here Ishizuka suggests that from the moment a woman gets pregnant through the nursing period, foods taken by mother and baby influence the baby's health, personality, and mind.

[24] "Myō na oisha," *Kagakuteki Shokuyō Zasshi* (13) (1908.1), 78-87.

labor patterns, and even one's birth mother's eating habits. His prescription was a mere piece of paper on which he wrote the foods the patient should take or avoid, and how to eat them, often in the form of lyric poetry. For example, for a young pale-faced female patient with a tall and slim body shape, Ishizuka identified the place and time of her birth through visual inspection (*bōshin*) as "mountainous region during winter" where lack of sodium was common. Based on this assumption, Ishizuka urged her to stop taking milk and bread, and to carefully eat steamed rice along with root vegetables and salted fish or seaweeds in order to make sure her body obtains enough sodium. Ishizuka made a policy of not charging any consulting fees and his clinic attracted patients nationwide. His clinic was so popular that he had to limit the number of patients up to one hundred per day.[25]

Needless to say, Ishizuka's diet therapy briefly described above was nowhere near regular medical treatment of the time. By the time Ishizuka opened his clinic, the new medical system modeled after those of European countries, especially Germany, had already been firmly institutionalized. Ever since the proclamation of the new medical system (*isei*) in 1874, medical institutions and policies, education, and license system were thoroughly geared toward launching a new western public health system.[26] The 1883 regulations on medical license and examination practically prohibited Sino-Japanese medical practices in public medical scenes. This regulation became irreversible when the findings of bacteriological knowledge were introduced in order to combat and prevent the intermittent cholera outbreaks during the last two decades of the nineteenth century. Compounded with this suppression of traditional medicine, the emerging modern pharmaceutical industry in Japan in addition buttressed the authority of new biomedical establishment.

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[25] Sakurazawa Yukikazu, *Ishizuka Sagen* (Tokyo: Shokuyōkai, 1928; reprint, Tokyo: Ōzorasha, 1994), 54-55 and 131-138.
[26] Shinmura Taku ed., *Nihon Iryōshi* (Tokyo: Yoshikawa Kōbunkan, 2006), 225-228.

Therefore Ishizuka's visual inspection, one of the major diagnostic methods in Sino-Japanese medicine, had already become untenable among then medical practitioners, not to mention his application of daily foods to specific diseases instead of pharmaceutical drugs.[27] Against this backdrop, it is not surprising that Ishizuka also gained the nicknames such as "defiant physician (*hantai isha*)" or "radish physician (*daikon isha*)" by his patients and fellow physicians. These denominations represent the sense of idiosyncrasy and peculiarity reflected in the eyes of those who had already accustomed to new biomedial practices. Also, the term *kagakuteki shokuyō*, or chemically nurturing life's vitality, itself reveals some ambiguity or even oxymoronic aspects of the movement, as it was an uneasy combination of a new analytical method based on the nineteenth-century laboratory chemistry and traditional wisdom of nurturing life. However, this does not necessarily mean that Ishizuka was considered to be a mere quack doctor. On the contrary, the ambiguity and ambivalence involved in Ishizuka's theory and clinical activity attracted supporters and clients from a wider range of the society. Some upper-class patients who were more familiar with Sino-Japanese medicine flocked to Ishizuka's clinic, while some medical professionals who were interested in chemical analysis of food ingredients approached him for consultation. In addition, an external impetus that pushed forward Ishizuka's theory into a broader campaign came with the social unrest in the immediate aftermath of the Russo-Japanese War, which I will discuss in the next section.

The Birth of the *Shokuyō* Association

[27] His ideas of *shokuyō* would probably have been regarded as "solely-speculation-based Chinese lore" by doctors from the mainstream institutions of the time, borrowing words from one German physician who complained about some Japanese physicians in early Meiji period. Cited in Hoi-eun Kim, *Doctors of Empire: Medical and Cultural Encounters between Imperial Germany and Meiji Japan* (Toronto: University of Toronto Press, 2014), 35.

In January 1905, Ishizuka Sagen and his supporters, mostly individuals from the Imperial Army and Navy, started issuing the bi-monthly newsletter *The Shokuyō News* (*Shokuyō Shinbun*食養新聞) to propagate Ishizuka's theory of the chemical diet for nurturing life.[28] The Society's *Shokuyō News* contained questions and answers section on various aspects of nurturing life through food, columns on Ishizuka's ideas on grainism, as well as practical advice on seasonal foods, and their uses in the battlefields of the ongoing Russo-Japanese War. In October of the same year, in the midst of social turmoil in the wake of the Hibiya riot and the subsequent declaration of martial law, Ishizuka and the adherents of *shokuyō* established the Imperial Food Education Society (*Teikoku shokuikukai*帝国食育会).

The founding manifesto of the Imperial Food Education Society stressed the significance of food and its implications for general goals of civil education. It starts with the growing concern with the deteriorating physical and mental conditions of the Japanese subjects, while reiterating the key point that eating right nurtures and renovates both body and mind of the individual. Echoing Ishizuka's food determinism and monistic understanding of mind and body, the manifesto considered the act of eating to be an absolute prerequisite for general education. In other words, it argued that food education (*shokuiku* 食育) exercises such an overarching influence over individual's mental and physical development that it determines the outcomes of education in all three dimensions—intellectual, moral, and physical (*chiiku* 智育, *tokuiku* 徳育, and *taiiku* 体育).[29] By prioritizing Ishizuka's *shokuiku* over then widely circulated terms of *chiiku*, *tokuiku*, and *taiiku*, the Society clearly stated its agreements with Ishizuka's dietary program as well as justified the educational significance of

[28] Satō Makoto, "Meijiki No Shokuiku Undo: 'Shokuyō Shinbun' to Teikoku Shokuikukai," *the Journal of Economics* (Hokkai-Gakuen University) 57(3) (2009).
[29] This was an extension of Herbert Spencer's well-known formulation on the three dimensions of education.

propagating the regime. The newly established national education system, it claimed, would be fruitless without considering the importance of food education.[30]

In late 1907 the Food Education Society was briefly dissolved and soon reorganized as the *Shokuyō* Association with strengthened membership under Ishizuka as its advisor. Among the five individuals who initiated the reorganization were figures such as Tokuhisa Tsuneori, a member of the House of Peers; Nezu Hajime, chief administrative Secretary of the Association for Common East Asian Culture (*Tōa Dōbunkai*); and Nakahara Tsunenori, founder of Japan Dental College. The fifteen approvers of the reorganization were individuals who were army or navy medical officers, law professors, entrepreneurs, and several members of the nobility. Even though the term "food education" was left out of the official name of the Association, its primary focus was placed on education and enlightenment on how and what people should eat. Their regular activities consisted of holding monthly workshops and lectures, in addition to publishing and distributing monthly journal for the members. Members were required to pay monthly subscription fees and regions with more than one hundred members could apply to the main organization to establish a local chapter. Despite the death of its leader Ishizuka in late 1909, the Association continued its activities until its temporary decline after the 1923 Great Kantō Earthquake. By 1918 its membership numbers expanded to about 3,000 throughout Japan, and local chapters were established in Kyōto, Yokosuka, and Kōchi.[31]

The Shokuyō Association, just as its predecessor, drew heavily on Ishizuka's theory on the chemical diet for nurturing life as the guiding principle. According to "The Outline of the Chemical Diet for Nurturing Life," which was published in 1912

[30] *Shokuyō Shinbun* 1(22), November 10, 1905, cited in Satō Makoto, "Meijiki No Shokuiku Undo," 89.
[31] "Shokuyōkai shōshi," *Kagakuteki Shokuyō Zasshi* 390 (1940. 6), 59-61.

not only for the Association members but also for the general public, the most important principle was to keep a balanced intake of sodium and potassium.[32] Recapitulating Ishizuka's critical stance toward the protein-centered approach to human nutrition, the "Outline" placed an emphasis on the functions of minerals, especially the antagonistic relation between sodium and potassium. In addition to quantitative analysis of chemical elements, the "Outline" introduced the notion of yin-yang to explain the antagonistic yet complementary characteristics of sodium and potassium. To determine the appropriate level of sodium-potassium for a person, the "Outline" suggested that solely focusing on chemical compositions of individual food items was insufficient. Rather, one must take into consideration the characteristics of individual constitutions, working style, climate, topography and seasonal changes, all of which could possibly affect the Na-K balance in the body. In light of this observation, the ideal food recommended for the Japanese people should be unpolished rice produced in Japan, for it was deemed to contain the best ratio of sodium and potassium at one to five. In addition, the recommended ratio of staple foods and side dishes was deemed to be seven to three, and eating in moderation was stressed at all times by the phrase "*hara hachi bun me* (腹八分目eat until you feel eighty percent full)" as traditional *yōjō* manuals have long asserted.

The most appealing part of the chemical *shokuyō* program to its participants, however, seemed to lie more in its claim on the cultural authority of tradition instead of the "modern" rational and scientific explanations. At the opening ceremony of the *Shokuyō* Association, Ishizuka started his speech by citing Emperor Senka's words from the 8th century classic *The Chronicles of Japan* (*Nihon Shoki*): "Food is the basis of everything" (*shoku wa tenka no motonari*食は天下の本なり).[33] Here Ishizuka

[32] "Kagakuteki Shokuyō no Tai'i" *Kagakuteki Shokuyō Zasshi* 54 (1912.4), 1-6.
[33] "Shokumotsu ni tsuite," *Kagakuteki Shokuyō Zasshi* 1(1) (1907), 5.

implied that his idea of food determinism (*shokuhon shugi* 食本主義) and rice eating habits originated from native centuries-old traditions and custom. Other members of the Association also frequently drew on "traditional" sources ranging from the Tokugawa *yōjō* manuals, Confucian and Daoist classics, to Shinto classics. The basic narrative pattern of the *shokuyō* writings invariably included the combination of certain sources of traditional wisdom and a scientific backup explanation for it. A new member of the Association, Ōtani Tsunesuke, neatly captured this trend by calling it "restoration of antiquity" (*fukko shugi*復古主義). He maintained that retrospection is by no means equivalent to a turn to old evils or savage customs to be abolished. Rather, he urged that *shokuyō*'s restoration of traditional foodways should be understood as a movement toward the future, just as the Meiji Restoration and the revival of *bushidō* spirits in the last two wars had shown.[34]

This "restoration of antiquity" of the *shokuyō* regime needs to be understood as part and parcel of a broader quest for tradition shared among late Meiji intellectuals since the 1890s. The Meiji government's successful suppression of both popular uprisings and the movements for freedom and people's rights (*jiyū minken*) was followed up by the ideological measures which were epitomized by the 1890 Imperial Rescript on Education. The victories over the two wars against Qing China and Imperial Russia cemented this political and ideological vector, and the tenets on civil morality and national subjectivity were canonized in the Boshin Edict of 1908: "The heritage of our divine ancestors and the illustrious history of our nation shine like the sun and stars. If our subjects cleave to tradition and sincerely strive for its perfection, the foundation for national development will largely have been secured."[35]

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[34] Ōtani Tsunesuke, "Shokuyōkai nyūkai no shushi," *Shokuyō* 1(4) (1908), 37.
[35] Cited in Oka Yoshitake, "Generational Conflict after the Russo-Japanese War," in *Conflict in Modern Japanese History: The Neglected Tradition*, ed. Najita, Tetsuo and J. Victor Koschmann (Princeton N.J.: Princeton University Press, 1982), 112.

Although the language and concepts retrieved from the past seemed old, the phenomenon of a return to the past" as such was totally new. As Stefan Tanaka rightly points out, the late Meiji ideologues compiled the traits of Japan's "tradition" in the Boshin Edict in reaction to what was considered as the West and its values such as individualism and materialism. Such endeavors to hark back to the past and idealize certain aspects of old customs were undertaken not only by so-called conservatives but modern bureaucrats, Western-educated intellectuals, and entrepreneurs.[36] In a similar vein, there was a simultaneous shift in focus in moral education from the ethics of universal civilization (*kaika*) to an ethics of spirit. The focus previous placed on the idea of hierarchical civilization, in which the West was at the center, was now moved onto the task of encouraging Japanese national character and folk morality.[37] In this way, the "restoration of antiquity," as observed by Ōtani, was part of this broader intellectual strand emerging since the 1890s, and because of this, a rich reservoir of cultural sources and language for traditionalism had been already available for the *shokuyō* movement to draw from.

Furthermore, around the time the *shokuyō* movement appeared, there was also specific and important historical impetus behind the ideological reworking of traditionalism in various daily cultural arenas. The Hibiya riot—the very backdrop of the establishment of the *shokuyō* Association—was the first urban mass protest in modern Japanese history. In a narrow sense, the protest was a nationalistic outcry against the Portsmouth peace treaty, which was to end the Russo-Japanese War without providing Japan with satisfactory indemnity and territorial gains. As historian Shumpei Okamoto argued, however, the riots also left far-reaching consequences by

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[36] Tanaka, Stefan, *Japan's Orient: Rendering Pasts into History* (Berkeley: University of California Press, 1993), 112.
[37] Richard Reitan, *Making a Moral Society: Ethics and the State In Meiji Japan* (Honolulu: University of Hawai'i Press, 2010), xi-xii.

revealing the potential of the masses as a political power and a sense of disillusionment toward the "father-emperor who failed to respond to a sincere popular appeal."[38] The ruling authorities reacted against these symptoms of ideological disintegration by putting in a great deal of effort to re-indoctrinate the "unruly" masses with the emperor-centered family-state ideology. This ideological counteraction took a variety of forms such as imperial military pageants, triumphal arches throughout Tokyo, especially in the vicinity of the Hibiya Park, and a series of imperial edicts.[39]

In light of this, moral education became one of the most important channels for this post-Hibiya riot initiative for ideological reconstruction. The first state-authorized moral education textbooks for schoolchildren were completed in 1903, but immediately after the Russo-Japanese War in 1905 the textbooks became a target of criticism by intellectuals for its lack of emphasis on the unique Japanese nationality (*kokutai*国体) and moral principle of loyalty and filial piety. Nishimura Shigeki's *Nihon Kōdōkai* (日本弘道会 the Japanese Society for Spreading the Way, 1887) also contributed to the growing criticism by issuing a statement denouncing the existing textbook as a failure to clarify the meaning of loyalty to the Imperial House and the State: "Since our national polity is one in which there is no State apart from the Imperial House and the Imperial House does not exist apart from the State, loyalty to the ruler is patriotism and patriotism is loyalty to the ruler."[40] As a result of this growing pressure to steer official ideology in a more conservative and statist direction, the Ministry of Education approved an extensive revision of the moral training

[38] Shumpei Okamoto, "The Emperor and the Crowd: The Historical Significance of the Hibiya Riot," in *Conflict in Modern Japanese History: The Neglected Tradition*, ed. Najita, Tetsuo and J. Victor Koschmann (Princeton N.J.: Princeton University Press, 1982), 274.
[39] Takashi Fujitani, *Splendid Monarchy: Power and Pageantry in Modern Japan* (Berkeley: University of California Press, 1996), 130-140.
[40] Cited from Richard Reitan, *Making a Moral Society*, 132. The original translation is from Kōsaka Masaaki, *Japanese Thought in the Meiji Era Kōsaka* (Tokyo: Pan-Pacific Press, 1958), 387.

textbooks. As a consequence, the revised 1910 version put greater emphasis on family-state, filial piety and loyalty than the 1903 pre-Russo-Japanese war version did.[41]

It is against this backdrop of a broader reorientation toward conservative ideology in which Ishizuka Sagen and his supporters shared their ideas on ethics of spirit, and placed the practice of "eating right" (*seishoku*) at the center of promoting civil morality. According to their logic, daily food intake determines individual health, and by extension, individual health determines the health of the state in the same way the health of a cell would determine that of the organism it comprises.[42] Choosing the right foodstuff, therefore, is considered to be not only a personal but a public act that would eventually determine the fate of the nation. At a time when spirit, mind, and morality became catchwords for ruling elites, the *shokuyō* advocates overturned the primacy of mind over body by employing such a food determinism, prioritizing food's effects on the body first and then the mind. One proponent straightforwardly argued that morality and ethics can never be achieved by merely indoctrinating and teaching values; rather, one must go through the embodied practice of eating right food—grains, more specifically rice—in order to arrive at moral perfection. In this sense, he stated, practicing *shokuyō* is "our duty."[43]

It is worth noting here that the *shokuyō* members stayed particularly vigilant against human desire expressed as the sense of taste, given that food choice and act of eating were apprehended in terms of the public ethics of the social good and bad, or the morally right and wrong. The founding manifesto of the *Shokuiku* Society addressed the concern with the unbridled appetite for palatable food and gluttony: "Nowadays people blindly trust scientifically groundless dietary regimens and praise

[41] Ibid.
[42] "Kokumotsu dōbutsu no honsei wo satore," *Kagakuteki Shokuyō Zasshi* 24 (1909), 1.
[43] "Shokuyō wa gojin no gimu dearu," *Kagakuteki Shokuyō Zasshi* 1(14) (1908), 27-8.

gourmandism (食道楽*shokudōraku* or *kuidōraku*), so much so that this practice has increasingly weakened the bodies of our national subjects, shortened their lifespans, and tainted their spirits. In the face of this phenomenon, we cannot turn a blind eye, and it is to this cause that we hereby establish the Society to gather like-minded fellows to rectify these practices."[44] *Shokudōraku* was used as an adjective in the original manifesto, but this term was in fact from the title of Murai Gensai (村井弦斎)'s novel of the same name which was serialized daily in the *Hōchi Daily* in the years 1903 and 1906.

The novel *Shokudōraku* and its sequel *Shokudōraku:zoku* [Gourmandism: continued] were published as separate volumes and sold over a hundred thousand copies, and were eventually adapted for the kabuki theater in 1905.[45] In the novel *Shokudōraku*, which was the one of the earliest example of the genre of gastronomic literature in Japan, Murai sought to introduce to his readers not only a variety of "authentic" Western cooking and recipes, but also new knowledge on modern nutrition, kitchen hygiene, and culinary technology. In this sense, *Shokudōraku* conveyed more than mere gourmandism and culinary pleasure, as Murai aimed to nurture a healthier population by enlightening his readers as to how to savor a more nutritious and healthy Western cuisine.[46] For the *shokuyō* supporters, however, Murai Gensai's gastronomic enlightenment was deemed as an upper class Western lifestyle. They considered the novel *Shokudōraku* to represent the old enlightenment scheme of promoting the mindless imitation of Western culture.

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[44] *Shokuyō Shinbun* 1(22), November 10, 1905, cited in Satō Makoto, "Meijiki No Shokuiku Undo," 92.
[45] Murase Shiro, "Shoku wo dōraku suru manyuaru," in *Disukūru no teikoku: Meiji 30-nendai no bunka kenkyū*, ed. Kaneko, Akio, Osamu Takahashi, and Morio Yoshida (Tōkyō: Shin'yōsha, 2000), 166 and 192.
[46] Ibid, 178-9. Similarly Tomoko Aoyama views *Shokudōraku* as the gastro-enlightenment novel. See Aoyama Tomoko, *Reading Food in Modern Japanese Literature* (Honolulu : University of Hawai'i Press, 2008), 133-138.

Ironically, the attack against *Shokudōraku* did not last long, because Murai himself joined the *Shokuyō* Association in 1910 along with a number of his followers. According to an interview with the *Shokuyō* Journal, Murai had a keen interest in the health effects of food, especially that of consuming unpolished rice (*genmai*)–he had been eating *genmai* as a staple even before he joined the Association.[47] Just like many other members of the association, Murai became a supporter of Ishizuka's *shokuyō* through his own embodied experience of curing a disease by relying on traditional foodways, a method which he was previously skeptical of. As such, Murai's joining of the Association was no coincidence since rice, particularly unpolished *genmai* rice, was also central in Ishizuka's dietary program.

Given the common belief even today of a close relationship between the Japanese people and their native rice grains, there is a need to historicize this emphasis on rice by the *Shokuyō* Association. On what grounds did individuals such as Ishizuka base their assertions of rice as *the* staple par excellence for Japanese bodies? Furthermore, it is essential to question his ideology of rice as an age-old treasure, which modern Japanese people must retrieve for a healthy dietary regimen. In this last portion of this chapter therefore, I argue that the theory of rice as *the* staple for the Japanese population cannot be understood without first positioning it vis-à-vis the prevalent discourse on meat eating which emerged in the policies of the Meiji government. The discourse on rice versus meat eating was central in *shokuyō*'s and Isizuka's theory.

Rice over Meat: Nature, Tradition and Japaneseness

[47] "Murai Gensai sensei to genmai," *Kagakuteki Shokuyō Zasshi* 37 (1910), 48-52; "Murai Gensai sensei to kataru," *Kagakuteki Shokuyō Zasshi* 55 (1912.5), 42-3.

Historians of Japan have often discussed the issue of meat eating as a symbol of the new Meiji government's enlightenment and civilization project (*bunmei kaika*文明開化). Emperor Meiji lifted the ban on meat eating in 1872, announcing that Emperor himself started consuming beef and mutton in his daily diet. This event has been understood as an official modern attempt to put an end to the long-lasted meat eating taboo, which is said to originate from the decree issued in the 7th century. Indeed, the consumption of meat remained very low for centuries, and if any, it was limited to wild game for banquet or for medicinal purposes.[48] Scholars of food history have offered different explanations on this age-old meat eating taboo: it was attributed either to the Buddhist restriction against killing animals, or to the widespread Shinto beliefs in defilement and impurity attached to meat eating.[49] In any case, the new Meiji government's attempt to encourage meat eating as opposed to contemporary folk customs epitomized the new government's endeavor to westernize the state and society institutionally as well as culturally.

In fact, the cultural authority of meat eating was presented not only in its association with Western culture, but also more importantly as claims of alleged health benefits. The typical rationale behind this consumption of meat was invariably accompanied by the racial discourse stressing inferiority of the Japanese physique, presumably due to the long-lasting dietary habits that persistently lacked meat. It should also be noted that leading early Meiji intellectuals such as Fukuzawa Yukichi also denounced the taboo against meat eating as a "groundless argument due to

[48] The Tokugawa government also banned the killing of cattle out of concern for preserving the number of draft animals and thus maintaining agricultural production. Susan Hanley, *Every Things in Premodern Japan* (Berkeley, CA: University of California Press, 1997), 65-6.
[49] Harada Nobuo, *Nihon no shoku wa dō kawatte kita ka: kami no shokuji kara gyoniku sōsēji made* (Tōkyō: Kadokawa Gakugei Shuppan, 2013), 154-155. Harata claims that meat eating was widely practiced prior to the Tokugawa Period (1603-1868) during which rice gradually predominated in culture and economy while the taboo against meat eating was strengthened. Harata Nobuo. *Rekishi No Naka No Kome to Niku: Shokumotsu to Tenno, Sabetsu* (Tokyo: Heibonsha, 1993), 12-13.

ignorance," and praised beef and cow's milk as rich sources of nourishment.[50] Ōsawa Kenji, a leading physiologist of the same time, also urged people to eat less plant-based foods and more meat products. He presumed that by doing so, the Japanese could build up physical strength and thus escape the potential threat of white people.[51] The idea that meat is the most nutritionally superior and hence much-needed food for the Japanese was so widespread among intellectuals that even the moderate claim that fish is as nutritious as meat triggered a fierce dispute between physicians and scientists then.[52]

Despite the popular distaste for and taboo against meat eating, the level of meat consumption in urban centers started to gradually increase in the 1870s and 1880s. Beef was the most popular meat in the cities such as Tokyo, Osaka, and Kyoto, where *gyūnabe* (Japanese style beef stew) restaurants mushroomed, and the number of cattle slaughtered tripled between 1882 and 1887.[53] The Meiji government officially supported the development of the livestock industry as well as the importation of live cattle and beef by means of providing subsidies in addition systemized quarantine and inspection services. Furthermore, the Imperial Army and Navy also played an important role in the popularizing of meat-eating practices by using of meat as an essential ingredient in their combat rations. As a result of these changes in these policies, in the course of the two wars waged against China (1894-5) and Russia (1904-5), the market for meat expanded exponentially.[54] Given that meat, especially beef, was considered to be the most nourishing and effective food in the strengthening

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[50] Fukuzawa Yukichi, "Nikushoku no setsu," *Fukuzawa Yukichi Zenshū* 20 (Tokyo: Iwanami, 1963), 38-40.
[51] Cited in Majima Ayu, "Nikushoku to iu kindai," *Asia Bunka Kenkyū* (11), 216.
[52] Takagi Kazuo, *Kanpon Shoku Kara Mita Nihon Shi* (Tōkyō: Mebaesha, 1997).
[53] Miyazaki Akira, *Shokutaku o Kaeta Nikushoku* (Tōkyō: Nihon Keizai Hyōronsha, 1987), 44-45.
[54] For example, in order to meet the demand for military rations, the Meiji government increased live cattle imports from Korea, from 133 to 19,787 between the two Wars. Majima Ayu, "Nikushoku to iu kindai," 218-222.

of the "undersized" bodies of the Japanese soldiers, it is not surprising that the military adopted meat as an essential article of their dietary regime.[55]

Against the backdrop of this meat-eating fad, Ishizuka Sagen and the Shokuyō Association argued against the alleged health benefits of meat. Ishizuka's criticism on the recent meat-eating craze was also based on a certain form of grainism. In the first chapter of his book *Chōjuron* (1896), Ishizuka clearly declared that the optimal diet for the human body should consist mainly of cereal grains. He proposed that the appropriate diet for humans and animals could be determined by dental anatomy, the movement of upper and lower jaws, and the kinds of digestive fluids. Herbivores are characterized by flat and ridged teeth, which are specialized for grinding grass and vegetables. Carnivores have developed canines and jaws that are incapable of moving sideways. Humans, unlike both herbivores and carnivores, have molars that are dented in the center, thereby leaving a little space when the mouth is closed. This shape of human molars, Ishizuka claimed, is designed to chew on cereal grains, so that the staple foods for humans are cereal grains while meat is not meant to be a daily food.[56]

The question then remains that if the optimal diet for humans is mainly cereal grains unlike other animal species, why should the Japanese eat rice among all other alternatives? It is to answer this question that Ishizuka brings in the determinants of climate, topography, seasonal characteristics, and individual constitution. According to Ishizuka, these four factors were important in determining the appropriate ratio of Na-K minerals in food. Latitudinal difference was particularly important not only because each climate zone provides different levels of sodium and potassium, but also

[55] Military physician Takaki Kanehiro deplored that among twenty-one countries Japan had the shortest soldiers. Ibid, 216.
[56] Ishizuka Sagen, *Kagakuteki Shokuyō Chōjuron* (Tokyo: Hakubunkan, 1896), 6-8. However, Ishizuka did not entirely deny meat consumption. He explained medicinal effect of meat in detail, and also added that meat eating is allowable for those engaged in manual work and aged between 20 and 40.

because this latitudinal difference affects the way the body regulates and maintains its temperature. For instance, the human body living in a warm zone seeks to cool down the body temperature by releasing sodium and retaining potassium from late spring on in preparation for hot summer; while, the counterpart living in a cool zone tries to warm up the body by absorbing more sodium to cope up with cold winter season.[57] Ishizuka thus claimed that it is therefore not a coincidence that certain regions of the globe take specific grains for their staple food for a long time: rye and wheat are more suitable for people living in colder climate, while rice and barley are good for those in temperate zones.[58]

One noteworthy feature of his argument is that he recognized and paid attention to the differences in climate and terrain within the archipelago as well. Thus, Ishizuka not only contrasted rye and rice, but also compared the characteristics of rice grown in northeast and southwest Japan.[59] Nonetheless, even though Ishizuka was well aware of the importance of regional differences in environment within Japan, he invariably demarcated the Japanese archipelago as a single unit when he discussed the optimal diet for the Japanese people despite his chemical balance theory providing no such logical grounds. In an editorial article "The Way of Partaking Beef" published in 1909, Ishizuka commented:

> Since the opening of our country to the world, people have partaken beef regardless of their status to the point that beef is being served as a side dish almost on a daily basis. I was surprised at the number of cows slaughtered every year, as well as at the amount of money paid to import beef all the way from Australia… Our country has been called *mizuho no kuni* [瑞穂の国country of luxuriant ears of rice] owing to the mild climate and location in the temperate zone. We have abundant rice harvest and thus the staple food for our people has been rice. Beef is not appropriate for those whose main staple food is rice. This is why there have been warnings and bans against beef

[57] "Kagakuteki Shokuyō no Tai'i," *Kagakuteki Shokuyō Zasshi* 54 (1912.4), 1-6.
[58] Ishizuka Sagen, *Taishinron*, 127-129.
[59] Ibid, 130.

eating habits since the age of gods. This custom continued until the Meiji Restoration.[60]

Ishizuka here concludes that, ultimately, climate and terrain (*tenkō chisei* 天候地勢) are *the* factors determining the appropriate kinds of food for people living any part of the world. In this sense, Ishizuka and his supporters did not entirely reject meat eating. On the contrary, Ishizuka even asserted in the same essay that for people living at higher latitudes than Japan, such as England and Germany, meat eating was quite essential in their diet.[61] The climate and topography of the Japanese archipelago, though, did not require its people to eat meat as frequently and as much as Europeans did since there was a danger accompanying such excessive intake of sodium on their part. For Ishizuka and his followers, the Meiji government's and medical professionals' encouragement of meat consumption and the resultant meat-eating fads were both problematic, as it would lead to the ruin of an otherwise balanced intake of K-Na. In this sense, the beef-eating fad was deemed to be not merely a perilous encroachment on the quintessential Japanese dietary tradition, but more importantly, a cataclysm to people's health.

This allegedly negative health effect of meat eating was widely shared by the *shokuyō* supporters. In addition, from the perspective of nurturing life and vitality, the critique of the meat-eating fad often led to a broader condemnation of unmindful and hasty introduction of Western knowledge on nutrition and health under the banner of the Meiji enlightenment project. The *shokuyō* supporters argued that European

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[60] Ishizuka Sagen, "Gyūniku no kuikata," *Kagakuteki Shokuyō Zasshi* 15 (1909), 2-3.
[61] Based on this logic Ishizuka interpreted the rise of vegetarian movements in some European countries, notably in England as a tacit attempt to maintain the K-Na balance by taking more potassium from plant-based foods, although the Western practitioners were barely mindful of this chemical principle behind it. Ishizuka Sagen, *Chōjuron,* 14. Ishizuka and the Association differentiated their program from vegetarianism by stressing the importance of grains among all plant-based foods.

medicine, especially German knowledge which was widely introduced by the Meiji intellectuals, were meant for the mainlander type body living in colder regions and therefore should not have been directly applied to Japanese islander's bodies. In the same way, for the *shokuyō* backers, an abrupt meat-eating fad in Japan would bring about undesirable health problems to the entire population.[62] One executive member of the Association, Yamamoto Chidō went so far as to deny the universality of medicine, claiming that nutritional knowledge "should not be like postal stamps that are internationally universal."[63]

This critique of meat eating and protein-centered German nutritional knowledge presented during the early activities of the *shokuyō* movement provided prototypical concepts for later developments of the movement. As Ishizuka's chemical diet indicated, the realization of the peculiarity of the human body, which requires particular local knowledge on healthful food, continued to exercise a powerful rationale for both the criticizing of existing medical discourse and the eulogizing of unauthorized local knowledge and practices. Represented by the climate and the terrain of Japan, natural environment constituted the grounds for the claim of rice over meat on one hand, while the rice-eating habit presented as a long lasting tradition—which was being challenged then—underpinned this very logic on the other hand. Needless to say, it is not difficult to point out how fallacious these arguments on "natural and traditional" rice eating habits were. For urban dwellers during the Tokugawa period rice was indeed the major staple food, but the question of who ate how much rice for their daily meals still remain unresolved.[64] Furthermore, evidence from earlier periods points rather to the prevalence of meat eating and the minor role

[62] "Beishoku no konjyakukan," *Kagakuteki Shokuyō Zasshi* 1(4) (1908), 1-4.
[63] "Kokumin no tairyoku no suitai suru wa shokumotsu ni ari," *Kagakuteki Shokuyō Zasshi* 94 (1915.8), 6.
[64] Susan Hanley, *Every Things in Premodern Japan*, 68, 78, and 159.

of rice as a staple. In fact, looking back to the past and tradition was not an exclusive domain for the *shokuyō* supporters. Their opponents, the physicians and bureaucrats who encouraged meat eating, also searched for their share of "traditions" from the past, by denouncing the Buddhist taboo as relatively new and foreign and arguing for a return to the pre-Tokugawa period in search for "real" Japanese dietary regimes.[65] Nonetheless, peculiar spatial dimension of nature as well as the timelessness of tradition buttressed *Shokuyō* Association's idea that the optimal and healthful food for the Japanese people is indeed rice. This geographic imagery of Japan and its climatological features along with the presumed historical continuity operated not only on the level of a symbolic image of nature that feeds into national identity, but also on physical and physiological grounds that justify practical directives for the Japanese bodily health and vitality.

In this chapter, I have shown how the health food movement called *shokuyō* emerged and evolved simultaneously with the transformations in the meanings of health, modern hygiene, and *yōjō* since the late nineteenth century in Japan. The *shokuyō* practitioners' sought to spread life-nurturing principles based on Ishizuka Sagen's chemical diet regime. Even though they presented their regimen as "natural and traditional," the core notions of nature and anteriority epitomized a late-Meiji reaction against the changes in daily life and society under the enlightenment project of Westernization since the Meiji Restoration. Their proposed "healing solution" of food as medicine and "rice over meat" was very modern in that it relied on a particular set of imagery projected onto the past in which people ate and lived following the "laws of nature."

[65] For the physicians who sought "traditional sources for meat eating," see Majima Ayu, "Nikushoku to iu kindai," 214 and 216.

As a public campaign, *shokuyō*'s food education rapidly attracted the attention of the upper-class elites nationwide in the midst of the post-Hibiya riot social unrest in the 1900s. By presenting their regimen as a form of traditional wisdom grounded in *shokuyō* precepts derived with the lens of science, Ishizuka and his supporters won the hearts and minds of ruling elites who yearned to gain a sense of self-assurance about their native customs and traditions which had previously been cast aside for the sake of enlightenment and Westernization in the three decades prior to their movement. Furthermore, the rise of cultural nationalism underwritten by the superiority of Japanese spirit since the 1890s also set the stage for the emergence of an effort to "return" to the purported "traditional, natural, and therefore healthy" diet of their ancestors. This newly emerged food traditionalism called *shokuyō* made eating "right food" into a powerful moral code whereby individuals as well as the society at large were expected to maintain their health for the nation.

Nonetheless, unlike the case of moral education and ideological contrivance, the modern medical system was less open to a change toward traditionalism. Owing to the medical professionals and government policies encouraging meat and dairy consumption, the medical and cultural authority of animal protein predominated in the mainstream medical discourse and urban gastronomic landscape. Ishizuka's critiques of the beef eating craze and renewed appreciation of rice as the symbol of nature and tradition only began to gain enthusiasts during this period. The early *shokuyō* movement, however, left an archetype of modern alternative medicine in the years to come.

CHAPTER TWO

RATIONALIZING EATING HABITS IN THE ERA OF NUTRITIONAL SCIENCE

Historians of nutrition science have maintained that the rise of nutrition science as a modern discipline roughly coincided with the formation of modern capitalist states. In Western European states, nutritional issues became prominent in the research domains of chemistry and animal physiology by the mid-nineteenth century.[1] In the 1840s the three major components of human food were identified and named as carbohydrates, fats, and proteins, and Justus Liebig's remarkably influential book *Animal Chemistry* (1842) laid the methodological foundation of quantitative analysis in animal and human metabolism and nutrition. Liebig's major concern was to reveal the relation between food intake as inputs and work or heat as outputs in the animal and human body. This focus placed on physical efficiency remained essential to nineteenth-century chemical physiology, and was also in line with the state's interest in dietary intervention to its people, primarily in order to have strong military forces and a productive labor force.[2] It was therefore not coincidence that factory and military canteens were the first sites where nutritional knowledge acquired from laboratories was put into practice.

Such management of specific groups of people's daily diet can be read as a sign of what Michel Foucault formulated as the mechanisms of modern bio-power. Foucault observed that from around the seventeenth century in Europe, for the first time in history, the biological existence of a population came to the foreground in

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[1] Harmke Kamminga and Andrew Cunningham, "Introduction: The Science and Culture of Nutrition, 1840-1940," in *The Science and Culture of Nutrition, 1840-1940*, ed. Harmke Kamminga and Andrew Cunningham (Amsterdam; Atlanta, GA: Rodopi, 1995), 1.
[2] Ibid, 4-5.

politics. Unlike the previous era in which power was exercised mainly through "deduction" of wealth, goods, labor, and bodies, the major form of power was transformed into one that exerts "a positive influence on life" and that "endeavors to administer, optimize, and multiply it."[3] A wide array of knowledge and technologies to produce a more productive and powerful population were created and implemented across different sectors of society, ranging from public and industrial hygiene, housing improvement, birth control, migration to child mortality survey. Along this line, scientific investigation of the relationship between health and food had been institutionalized and had increasingly gained political importance from the mid-nineteenth century onward. Nonetheless, the history of nutrition science has rarely been discussed in relation to Foucault's bio-politics. Although recent studies have infrequently linked "rational" nutrition and biopolitical practice in cases such as Germany and Denmark, questions regarding the concepts and techniques that enabled nutritional biopolitics seem to remain largely unexplored.[4] Historian Corinna Treitel pointed out that studying nutrition science and policy as key sites of German biopolitics could be a way to expand our discussions of biopolitics, which tended to principally focus on racial hygiene and eugenics.[5]

Scientific findings for the foundation of nutrition science dotted the nineteenth century. However, it is the outbreak of the First World War, experienced as the unprecedented total war in the human history, which provided the warring nations

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[3] Michel Foucault, *The History of Sexuality: An Introduction* (New York: Vintage Books, 1990), 136-7. It should be noted that the new modern power's investment in life and survival of bodies and the race does not necessarily exclude the power's right of death. As Foucault also warned, much as the life-administration power became crucial, wars became more brutal than ever before and "massacres have become vital." Ibid, 137.

[4] Corinna Treitel, "Max Rubner and the Biopolitics of Rational Nutrition," *Central European History* 41, no. 1 (March 2008); Svend Skafte Overgaard, "Mikkel hindhede and the Science and Rhetoric of Food Rationing in Denmark 1917-1918," in *Food and War in Twentieth Century Europe*, ed. Ina Zweiniger-Bargielowska et al. (Farnham, Surrey, England; Burlington, VT: Ashgate, 2011).

[5] Treitel, "Max Rubner and the Biopolitics of Rational Nutrition," 2.

with a practical and urgent need to efficiently manage food resources and manpower. The War functioned as a critical moment in linking the problem of the home front directly to the performance at the war front, and thus the efficiency in the kitchen was deemed to contribute to war efforts. This relation can be seen in countries worldwide. For instance, we see instances of nutritionists like Max Rubner taking a leading role in combating wartime food shortages in Germany; or the US Food Administration conducting a massive national nutritional survey based on scientific approaches to dietary health in order to better launch wartime food conservation programs.[6]

In the case of Japan, like other industrializing nation-states, research and distribution of knowledge on food and health centered on new public hygiene (*eisei*) initiatives since the Meiji restoration. Chemical analysis of individual food ingredients as well as study of major nutritional elements' absorption rates were consistently being carried out, while medical research on beriberi and debates on military rationing were at the center of military medicine. However, in the aftermath of the First World War, or more precisely, after the Rice Riots in 1918, a new trend began to dominate in the discourse of nutrition and health. This chapter traces this trend of the emergence of nutrition science within the context of the wartime economic hardship and the Rice Riots. I first sketch out the establishment of nutrition science as a form of social engineering to cope with the "food crisis." I will then go on to examine how nutrition science was put into use for social campaigns to reform everyday life to deal with the middle class crisis. By looking at this process, I will argue that the discussion of health and food increasingly became inseparable from the emerging domain of nutrition

[6] Paul Weindling, *Health, Race, and German Politics between National Unification and Nazism, 1870-1945* (Cambridge: Cambridge University Press, 1989), 288-9; Harvey A. Levenstein, *Revolution At the Table: The Transformation of the American Diet* (New York: Oxford University Press, 1988), 137-146.

science (*eiyō*), and that this shift transformed the conceptual framework in which the relationship between eating and health had been discussed thus far.

The Rise of Nutrition Science as Social Engineering: From *Shokuyō* to Eiyō

In a roundtable discussion held in 1972, Hara Minoru, one of the leading nutrition scientists during the Showa period, pointed to the Rice Riots in 1918 as the origin of nutrition science in Japan. When he finished his studies in agricultural chemistry at Tokyo University in 1920, Hara found no such thing as a systematic area of study on food and nutrition yet. However, in the aftermath of the Rice Riots in the summer of 1918, he stated in retrospect, the issue of population pressure accompanied by food supply problems had started to preoccupy contemporary bureaucrats and intellectuals then. Shortly afterward in 1920, the Home Ministry responded to this concern by establishing the National Institute of Nutrition, thereby precipitating the onset of scientific nutrition research.[7] According to Hara's recollection, the food security problem, more specifically rice shortage, therefore spurred the birth of nutrition science as a field of research and institution.

Indeed the Rice Riots have been recorded as an unprecedented explosion of massive protests over the recent spike in rice prices, and have been known as a historical even that left huge impacts on the Japanese society. A short-lived economic boom during the First World War was soon followed by severe inflation once the war ended. Rice prices inflated from 12 yen per one *koku* (approx. 180L or 5.12 bushels) in the fall of 1916 and to 45 yen in 1918. As a result of this sudden increase in rice prices, strikes began to sprout in coastal villages along Toyama Bay in July 23 the same year. The strikes, which were initiated by fishermen's wives in those coastal

[7] Sakurai Yoshiko, Hara Minoru, and Miyazaki Motoyoshi, "Zadankai: Nihon no Eiyō mondai wo furikaette," *Kagaku to Seibutsu* 10, no.1 (1972), 29.

villages, quickly began spreading spontaneously nationwide. The riots continued until mid-September and military troops were eventually called in to 70 out of 300 cities, towns, and villages involved in the wave of unrest.[8] The government reacted to this social unrest promptly. In order to prevent a recurrence of such sweeping protests, policy makers strove to take both long- and short-term measures to increase rice production as well as to control the volatility of market price. This included measures such as an extensive land reclamation plan, rice paddy rationalization, the modernization of existing granary systems and a new grain-market regulation system.[9]

Going back to Hara's recollection, despite his recognition that the Rice Riots triggered the establishment of scientific research on food and nutrition, he did not answer the intricacies of how and why the historical event led to the shift in policy. As a matter of fact, the military, some labor research institutes, and municipal hygiene stations had been consistently undertaking nutritional surveys and chemical analysis of foodstuffs long before the riots erupted. Such research on food substances or absorption rates, however, did not necessarily entail economic considerations. Nevertheless, the Riots provided a critical moment in which the issue of food now undoubtedly came to be viewed as a possible source of economic and social problems on the national scale. The Riots demonstrated the power and extent of popular disturbance caused by the rice price and this change eventually elevated a mere "food prices issue" to a more overarching "food problem (*shokuryō mondai*)" which would ultimately concern national security. As Hara also mentioned, this food problem was often addressed by bureaucrat-scholars along with the pressure of a growing

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[8] Shōwa Joshi Daigaku Shokumotsugaku Kenkyūshitsu, *Kindai Nihon Shokumotsu Shi* (Tōkyō: Kindai Bunka Kenkyūjo, 1971), 467-8 and 475-6.

[9] Michael Lewis, *Rioters and Citizens: Mass Protest in Imperial Japan* (Berkeley: University of California Press, 1990), 245-6. The most fundamental and far-reaching consequence at the Empire level was launching a Program to Increase Rice Production in colonial Korea from the 1920s onward.

population, a concern made evident from official statistics that became available since 1920. The discussions on this combination of "population and food problems" became even more frequent and conspicuous in the late 1920s since Japanese overseas migration, which was supposedly alleviate the growing population pressure, faced obstacles other than in the colonies or occupied territories. In 1926, the Ministry of Agriculture and Forestry estimated that future population would increase from 59,159,000 as of 1925 to 85,030,000 in 1955, a projection which led to the concern that population will explode at a much faster rate than that of food production increase.[10] The government set up a research unit within the cabinet, the Population and Food Problems Council (*Jinkō Shokuryō Chōsakai*), directly under Prime Minister in 1927.[11]

Throughout the 1920s bureaucrats and scholars put forward a wide array of suggestions to resolve this growing "food problem," ranging from socio-economic measures such as colonial development in Korea and Taiwan and collective farming initiative, to technological solutions like the invention of new artificial foods and fertilizers. Yet, one of the most striking perspectives in the immediate wake of the Riots particularly stressed rice as a consumer good and rice eaters as consumers. Indeed, the Riots were not so much about the problem of absolute hunger and famine, or the population pressure on food resources in general, as Hara vaguely mentioned. Rather, it was more about a very specific commodity—rice—that had become essential part of the majority of the population living in a highly industrializing society. By the time the Riots erupted in 1918, rice was consumed as a commodity even for the households in farming villages not to mention city dwellers. The rioters did not demand free rice, but they insisted that as consumers, they have the right to a

[10] "Hito wa fueru mo shokuryō tarazu." *Osaka Asahi Shinbun*, May 7, 1926.
[11] "Jinkō shokuryō mondai chōsakai kansei," *Kokumin Shinbun*, March 31, 1927.

supply of rice at a reasonable and fair price. Rice consumption as commodity as such reflected the changed standard of living brought about by industrialization and urbanization since the late Meiji period, especially after the Russo-Japanese War. The Riots betrayed the fact that rice had already become essential part of daily consumption for a substantial portion of the population in Japan; it was not only as the preferred main staple but also as the symbol of acceptable standard of living.[12] This is why much of the discussion on food in the immediate aftermath of the riots centered on the issue of rice at the consumption level: how to reduce rice consumption and what food items may serve as substitutes for rice?

As a result, the food problem had now become more inseparable from the issue of consumer economy than ever before, and to resolve this growing concern, there emerged a ground for social scientific intervention. For an optimal economization of food resources and rationalization of eating habits, it was necessary to carry out more sophisticated scientific analyses of minimum requirement of major substances. On what grounds could the authorities recommend cheaper substitutes for rice and other costly foods preferred by the Japanese? How could the consumption of imported rice be justified and encouraged even when the consumers consistently showed little preference toward them over domestically grown ones? What were the most economic and at the same time nutritious foodstuffs for the entire population? These were the questions that underscored the research activities in nutrition science and dietary medicine as an emerging new field. In other words, what came to the fore and continued to figure high as a field of applied science was the two-fold goal of

[12] Francks suggests the Rice Riots can be read as "indicative of the relation between patterns of food consumption and the changes consequent on urbanization and industrialization" as was the case in food riots elsewhere. In Revolutionary Paris, for example, workers rioted over the prices of coffee and sugar, even though bread was available. Penelope Francks, "Consuming Rice: Food, 'Traditional' Products and the History of Consumption in Japan," *Japan Forum* 19(2) (July 2007), 158.

nutritional science: discovering the most efficient combination of cost-effective and nutritious foods for the entire population.

The Home Ministry Hygiene Bureau's timely publication of the two official booklets in 1919 was indicative of this attitude taken by the authorities to tackle the new goal. One booklet was entitled, *Kakkoku ni okeru Shokuryō Mondai* [*Food Problems in Each Country*], which compiled translations of a series of journal articles on nutrition and food management in Europe and the US during WWI.[13] This publication demonstrates the extent to which the Japanese scientists and bureaucrats had looked into the lessons from the recently ended World War One in order to solve the food problems they faced. The selected articles covered the food shortages and management in Germany, the activities of the US Food Administration, food conservation and its effects on health, the UK national kitchens, wartime loaf, and the Allies council on food, to name a few. Just as in Europe and the US, where wartime food shortage led to policy-level research on food and nutrition, the post-Riots "food problems" triggered Japanese experts' interest in a systematic management of food resources and nutrition research.

The other booklet, *Eiyō to Shokuyō Keizai* [*Nutrition and Food Economy*, hereafter] was a fifty-five paged concise manual, which combined basic knowledge on nutrition and practical guidelines for daily food preparation.[14] The Hygiene Bureau revealed that this document was produced in order to disseminate up-to-date knowledge on nutrition among the general public. By doing so, the Bureau expected "individual national subjects to thoroughly realize the importance of nutritional knowledge and food economy" so that they can ultimately contribute to national food

[13] Naimushō Eiseikyoku Hoken Eisei Chōsakyoku, *Kakkoku ni okeru Shokuryō Mondai* (Tokyo: Naimushō Eiseikyoku, 1919). The original articles were from The US Food Administration documents, *The Lancet* (London), *British Medical Journal*, *Medical Record* (New York), and *Swiss Medical Weekly*.
[14] Naimushō Eiseikyoku, *Eiyō to Shokuyō Keizai* (Tokyo: Naimushō Eiseikyoku, 1919).

conservation.[15] The booklet thus particularly stressed the intermediary role of local authorities and publishing media across the country in propagating its basic ideas. Indeed, the Fukushima Prefecture Bureau of internal affairs published a similar document in the very same year, entitled *Gojin wa nani wo Kūbekika* [*What Should We Eat?* (1919)], in which one whole chapter was devoted to the excerpts of two sections from *Nutrition and Food Economy*.[16]

It should be noted that *Nutrition and Food Economy* was authored by two leading physiologists of the time, Nagai Hisomu (1876-1957) and Saiki Tadasu (1876-1959). Nagai, a physiology professor at Tokyo Imperial University Medical College, was also famed for his life-philosophy and introduction of eugenics to Japan. He wrote the first two chapters, "Why is food important?" and "How much food should we eat?" to provide readers with some basic knowledge on nutrition, Nagai first explained the working of human nutrition by likening the human body to a steam engine: "just as burning coal creates the heat and power in a steam engine, protein, fat, and carbohydrate create life energy in the human body."[17] After briefly explaining which food ingredients are high in these three major nutrients, Nagai stressed the importance of protein among others. Since protein, he stated, is the most important and abundant substance found in the human body yet it cannot be either synthesized or transformed from fats or carbohydrates. He asserted, therefore, protein should be taken by eating food, preferably through various sources. This summary of the basics of nutritional knowledge was faithful to the classic formulation of nutritional principles developed

[15] Ibid, Introductory Remarks (no page number or section title).
[16] Fukushima-ken Naimubu, *Gojin wa nani wo Kūbekika* (Fukushima: Fukushima-ken Naimubu, 1919), Chapter 4. This document largely concerned various methods of saving rice and strategies to propagate them such as the announcement of prizes for creating food conservation practices. In the meantime, unlike the central government's document, this booklet also contained information on the production side: how to increase agricultural production as well as how to cultivate alternative grains such as barley in Fukushima.
[17] Naimushō Eiseikyoku, *Eiyō to Shokuyō Keizai*, 2.

by German physiologists since the mid-19th century, which was then introduced to Japan by the Meiji physicians. In *Animal Chemistry* (1842), Justus von Liebig claimed that nitrogenous substance, i.e. proteins, were the basic components of muscle tissue and therefore only proteins could support muscle growth.[18] Liebig's student, Carl Voit put forth the "Voit Standard," which included the daily protein minimum of 118 grams for an average male worker. This Liebig-Voit's emphasis on protein, more specifically animal protein, became a widely accepted standard in industrialized countries at the turn of the century.

Furthermore, Nagai's analogy between a steam engine and the human body also reflected his subscription to the newer conception of food as "fuel" for the body and the calorimetric understanding of each main nutrient. In the 1880s, the German physiologist Max Rubner's experiments proved that all three major nutrients are interchangeable in the body as caloric equivalents. Before long, this law of thermodynamic equivalence was widely accepted, and the energy value of food expressed as "calories" internationally permeated social scientific analyses on the relationship between labor efficiency, dietary habits, and poverty.[19] These experiment's results were also introduced in Japan almost simultaneously and widely adopted by medical institutions. Nagai reiterated this accepted universal unit of energy value of foods by carefully instructing readers about how to calculate total calories of what they eat based on Rubner's theory: multiply the grams of proteins, carbohydrates, and fats by 4.1, 4.1, and 9.3 respectively.[20]

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[18] Mark R. Finlay, "Early Marketing of the Theory of Nutrition: The Science and Culture of Liebig's Extract of Meat," in *The Science and Culture of Nutrition, 1840-1940*, ed. Harmke Kamminga and Andrew Cunningham (Amsterdam; Atlanta: Rodopi, 1995), 50.
[19] Treitel, "Max Rubner and the Biopolitics of Rational Nutrition," 12.
[20] Naimushō Eiseikyoku, *Eiyō to Shokuyō Keizai*, 14. Nagai also suggested taking ten percent out of the total calories calculated this way since approximately ten percent of ingested foods are indigestible in the body.

Building on this background nutritional knowledge, Nagai ultimately introduced the concept of the standard healthy diet (*hokenshoku* 保健食). According to Nagai, the human body tends to keep the stable absorption amount of nutrition regardless of how much you eat. The logic of this argument claims that, even if one partakes of nutritious foods such as beef or eggs copiously, the body only digests and absorbs the amount metabolically needed and the much of the rest is only to be excreted from the body as waste products, and in some cases excessive nutrition would burden and harm the internal organs. This "faulty nutrition," Nagai said, would not only damage individual and household economy, but also cause a huge wastage when considered at the national level. The standard diet was thus the concept devised as a way of measuring the extent of the maximum economization with no negative effects on individual and national health. Therefore Nagai, like other physicians of the time, considered such nutritional knowledge to be essential to rationalize national food economy not only for the wartime but ultimately during the peacetime as well.[21]

To provide concrete and precise guidelines for the standard diet for the Japanese, Nagai suggested the following figures: for a man of average weight (49-52kg) doing moderate work daily, he requires 90 grams of protein, 20 grams of fats, and 450 grams of carbohydrates, totaling about 2400 kcals.[22] For females, teenagers, and children, he added, fewer amounts are required: about 80 percent of the standard male diet would be enough for young male adults aged between 14-17 (70 percent for

[21] Naimushō Eiseikyoku, *Eiyō to Shokuyō Keizai*, 10-12.
[22] Nagai Hisomu stated that he gained these figures based on the studies undertaken by "reliable Western scholars," but did not provide any source information. The most widely adopted dietary standards were Carl Voit's European one and Wilbur Olin Atwater's US version, and it is likely that Nagai made use of their standards as well. Since these two standards set the average weight at 70kg of a male worker at moderate labor, Nagai's adjusted the figures in proportion to the Japanese male's average weight. The standards for protein and total calories correspond to Atwater's (125g, 3500kcal) and carbohydrates correspond to Voit's (500g). In the case of fats requirement, however, Nagai's figure is much lower than any of these standards.

female young adults) and the wife; 60 percent for children aged between 10-13; 50 percent for children aged between 6-9 and 40 percent for children aged between 2-5.[23] This detailed figures for the standard diet apparently followed a hierarchical family structure model in which the husband was placed at the center as the head of the household who required the largest amount of food and all other family members' nutritional requirements were presented in comparison with him in descending order. In this way, the manual conceived of family members of a household as the nutritional subjects and sought to build its target audience among the household unit and its family members.

Even though Nagai seems to have borrowed experimental results for the standard diet from Voit and Atwater and tailored it for the Japanese, he ended his chapter by vaguely suggesting that according to more recent studies, under unavoidable circumstances, protein intake could be cut down to almost half and total daily calories could be downsized to 1850 kcal.[24] It is clear that Nagai's emphasis was placed on the ordinary people's effort to economize food resources, especially in the wake of social unrest in the aftermath of the Rice Riots. Yet his rather irresolute tone about what consists of the standard healthy diet and its practical minimum requirements seemed to reveal a lack of consensus at that historical moment among scientists on the standard diet for the Japanese people.

Nagai Hisomu's theoretical outline of nutritional principles was followed by Saiki Tadasu's chapters on the practical guidelines for economizing food resources. In particular, he asks the following questions: "What is economical, appetizing, and nutritious food?" and "Why is food economy important?" Having earned his PhD degree in physiological chemistry at Yale in 1907, Saiki established a private institute

[23] Naimushō Eiseikyoku, *Eiyō to Shokuyō Keizai*, 13.
[24] Ibid, 16-17.

for nutrition research in 1914 and began conducting a series of experimental research on rice polishing, animal protein, and rice absorption rates by different cooking methods. Besides establishing nutrition science as an independent area of study through systematic laboratory experiments, he was also deeply interested in public nutrition as a way to improve general health conditions of the population.[25] Such an approach to nutrition science and food economy was concisely illustrated in the two chapters of *Nutrition and Food Economy* where Saiki stressed the importance of food security as a matter of utmost national concern. Saiki reiterated the Malthusian concern by pointing out rice production was already being outpaced by rapid population growth by 700,000 per year in Japan. While not disregarding imported rice as a temporary solution to ease the situation, Saiki claimed that the more fundamental solution was to save food resources and gradually change people's taste preferences from rice toward alternative ingredients. Standing against the idea of compulsory enforcement of dietary regulations by the authorities, Saiki emphasized voluntary initiatives on the part of citizens to economize food resources in the long run. His ultimate aim was the achieving of self-sufficiency of major staple foods on the national level.[26]

His call for the volitional endeavor on the part of Japanese citizens was summarized in "the ten principles for economical nutrition." They are as follows: (1) pay attention when choosing ingredients; (2) improve cooking methods to make dishes more palatable; (3) make the most of the ingredients to prevent food waste by keeping in mind that conventionally uneaten food parts such fish head and vegetable skins contain valuable nutrients; (4) chew thoroughly for better digestion; (5) eat a variety of foods; (6) find out more economical purchase methods such as public markets or

[25] Hagiwara Hiromichi, *Nihon eiyōgaku shi* (Tōkyō: Kokumin Eiyō Kyōkai, 1960), 36-37.
[26] Naimushō Eiseikyoku, *Eiyō to Shokuyō Keizai*, 33-37.

consumer cooperatives; (7) make use of different types of food preservation methods such as sun-drying, canning, pickling in salt etc.; (8) do not select ingredients only because they are good-looking and also consider buying imported rice; (9) keep in mind that neither coarse foods nor gourmet meals are superior; (10) avoid gluttony.[27] At the core of this manual, Saiki spent a number of pages to elaborate on the first principle of "how to choose ingredients" by presenting exact calculations of nutrient amount and monetary value. To indicate which ingredients were more cost-effective vis-à-vis its nutritional value, Saiki listed various food ingredients' required amounts and prices to gain the same amount of protein and calorie as 93.7 grams of first grade beef tenderloin, which he took as the standard. Based on the comparison of these numbers, Saiki suggested that readers select inexpensive options of horse meat, pork, chicken, beef in due order; choose plant foods over animal foods; buy miscellaneous grains rather than rice; and consider purchasing imported foreign rice which was cheaper yet contained the same nutritional values.[28]

These principles in fact had been created and propagated by Saiki under what he called the "principles for economic nutrition (*keizai eiyōhō*)" in his lecturing tour during the peak of the Rice Riots nationwide. It is clear that these principles were based on his model daily meal menus. These menus which were designed for three people, presumably for a family, included the dishes for three meals accompanied by each required ingredient's weight, protein content, calorie content, and its monetary value. Saiki provided two different model menu sets, one of which was composed with more expensive yet less nutritious ingredients in terms of their protein and caloric contents; and another with less expensive ingredients that provide more protein and calories. By deliberately juxtaposing these two model menus, Saiki strove to persuade

[27] Ibid, 17-20.
[28] Ibid, 20-29.

people to realize that a cheaper and humble table of food could also make their meals as nutritious and pleasurable. Through doing so, he sought to thus encourage "both the rich and the poor to follow this method."[29] It is noteworthy that more examples of such economical and nutritious menus recommended by Saiki were also added as part of an appendix to *Nutrition and Food Economy*.[30] Saiki's ten principles and guidelines for "economic nutrition" presumed that target readers were likely consumers who were expected to make rational choices in terms of food ingredients and simultaneously housewives who were supposed to cook better meals for their families.

Around the time when Saiki contributed to this Hygiene Bureau's booklet, his effort to gain governmental support for his private institute started to bear fruit. The 43th Imperial Diet committee meeting approved Saiki's petition and his institute was reorganized as The Imperial State Institute for Nutrition (*Eiyō Kenkyūjo* 国立栄養研究所) in September 1920. The Institute set up three divisions for chemical physiology, food analysis, and public survey/education respectively, and had, by the end of 1921, employed thirty researchers. Appointed as the head of the Institute, Saiki clarified and emphasized the significance of nutrition research as "social policy" through which knowledge and practice of nutrition science intervene in a range of societal issues such as labor policy, household economy, ideological issues, not to mention dietary diseases at the national scale.[31] To this end, The Imperial State Institute for Nutrition, now organized under the banner of the Home Ministry Hygiene Bureau, gained the momentum needed to propel its research and public education on nutrition.

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[29] Hagiwara, *Nihon eiyōgaku shi*, 41-42. The model menu sets are presented in Table 2 on 42.
[30] Naimushō Eiseikyoku, *Eiyō to Shokuyō Keizai*, "Hokenshoku kumidate," 48-55. The other part of the appendix contained the detailed recipes of twelve different kinds of rice substitute dishes such as steamed barley rice, steamed barley and sweet potatoes, buckwheat flour paste with sweet potatoes ("Kome migawari no omonaru tabemono no chōrihō," 38-48).
[31] Hagiwara, *Nihon eiyōgaku shi*, 46-47 and 60-61.

Although Saiki's Imperial Institute served as the center of nutrition and food research in the post-Rice Riots milieu, the following decade saw a rapid establishment of other nutrition research institutes as well. As an umbrella organization of the imperial army, members from the Army Provision Bureau established the Friends of Food Society (Ryōyūkai 糧友会) in 1925. Masuda Takashi from the Mitsui *zaibatsu* and other entrepreneurs donated funds to Keiō University Medical School to establish a nutrition research institute in 1926 (Shokuyō Kenkyūjo 食養研究所). The Hygiene Experiment Stations in Osaka and Tokyo also set up nutrition research and survey departments in 1928 and 1929. In 1933, physicians Kagawa Aya and her husband Shōzō from Shimazono's internal medicine laboratory of Tokyo Imperial University founded the Home Cooking School (Katei ryōri gakuen 家庭料理学園) in order to disseminate knowledge and techniques of cooking based on up-to-date scientific and medical research.[32]

Hara Minoru himself, the nutrition scientist who pinpointed the Rice Riots as the starting point of nutrition science in Japan, worked first for Saiki's Imperial State Institute for Nutrition and then for Shokuyō Kenkyūjo at Keiō University Medical College. Given that Hara's professional career coincided with the period when nutritional research began mushrooming from 1920 onward, it comes as no surprise that Hara considered the Rice Riots as the origin of the science of nutrition in Japan. However, Hara was not alone in connecting the need for food and nutrition research to the post-riots "food problem." Even though different institutes maintained diverse foci of research initiative, widespread concern about food crisis and its resultant social

[32] Takagi Kazuo, *Shoku to eiyōgaku no shakaishi* (Kanagawa: Self-published, 1985), 418-426. The initial name of Kagawa's cooking school was "Home Shokuyō Workshop" (Katei shokuyō kenkyūkai). Kagawa changed this name to "Home Cooking School" in 1940. After WWII, the School was reorganized as Kagawa Nutrition School (Kagawa Eiyō Gakuen), which became the forerunner of current Kagawa Education Institute of Nutrition (Joshi Eiyō Daigaku, www.eiyo.ac.jp).

crisis brought about by the Rice Riots set the stage for the institutional development of nutrition science in a way conducive to systematic production and application of knowledge regarding how to purchase, cook, and eat food.

The social urgency to rationalize eating habits at that moment in time connected the two sociopolitical goals of boosting population health and national economy, and this new direction laid the foundations of research and institutional development of nutrition science. Such institutionalization of scientific research methods through laboratory experiment and statistical survey inevitably necessitated and simultaneously reinforced the conceptual framework to understand food and metabolism in terms of specific nutrients and energy value. In other words, any suggestions on appropriate eating and dietary advice were to be expressed in the language of protein, carbohydrate, fat, vitamin, and calorie, in quantifiable values. The effort to economize ordinary people's eating habits, as Nagai and Saiki's brief manual demonstrated, had to rely on quantitative calculations on daily intake of required nutrients at the lowest cost.

Notably, this post-riot expansion of nutritional science research coincided with the process in which the term *eiyō* (栄養) gained theoretical and practical authority over other similarly used terms such as *shokuyō* (食養) or *jiyō* (滋養).[33] While these three terms were used interchangeably to broadly refer to the relationship between food and health, or to the ways to nourish the body by consuming specific foods, the tendency to differentiate these terms emerged during the post-Riots decade. One instance of this is the way in which Saiki Tadasu's Imperial Institute for Nutrition Research spearheaded the institutionalization of nutrition science with the term "*eiyō*"

[33] Two different Chinese characters for *eiyō* were being used for "栄養"and "営養" in the *rangaku* medical or Kampo texts in the Tokugawa period, and the latter was more frequently used in the Meiji period. However, after the establishment of the Imperial Institute for Nutrition Research in 1920, the former became predominant both in medical publications and general usage. *Nihon Kokugo Daijiten*, s.v. "eiyō."

at its center, consistently using it for all publications it released. In his 1926 book entitled *Eiyō,* Saiki succinctly articulated a new perspective for nutrition research using a tripod framework of physiology, economy, and morality. The purpose of the *eiyō* research, he said, was to rationalize and harmonize the three principles behind food consumption: physiological needs, economic conditions, and social responsibility.[34] In other words, Saiki sought to refashion the meaning of *eiyō* to encompass the realms of physiological knowledge, resources management, and social education, making it stretch beyond the narrow boundary of its previous fragmented knowledge on food or metabolism.

In the meantime, the term *shokuyō* as in the sense of the Shokuyō Association (as I explicated in Chapter One) was less frequently used in the medical and social scientific discourses. One striking exception was the establishment of Shokuyō Kenkyūjo at Keiō University Medical College. Considering that the earlier usage of *shokuyō* was by no means necessarily associated with Ishizuka Sagen's theory on potassium-sodium balance and vegetarian-grainism, the Keiō Shokuyō Institute did not have any clear conceptual or personal connections to the Shokuyō Association. In fact, a former bureaucrat and writer, Hagiwara Hiromichi commented that the donor Masuda Takashi must have had Ishizuka's Shokuyō Association in mind when he funded the establishment of the Institute. However, Hagiwara also added, Masuda wished to found a dissimilar form of organization.[35] Unfortunately, Hagiwara did not provide further explanations on how different an institute Masuda had envisioned to build, and there are no historical sources that point to Masuda's own involvement in Ishizuka's Association.

[34] Saiki Tadasu, *Eiyō* (Tokyo: Eiyōsha, 1926), 15-16.
[35] Hagiwara Hiromichi, *Eiyō to shokuyō no keifu* (Tōkyō: Sanrōdo, 1985), 52.

Nonetheless, Keiō University Medical College professor Ōmori Kenta (大森憲太, 1889−1973), who was appointed as the head of the Keiō Shokuyō Institute, implied his understanding of *shokuyō* in explicating the role of the newly established institute: "while the Imperial Institute focuses on food and nutritional value research, we would like to, as an institute affiliated to a hospital, focus on food therapies."[36] The concept of food as a means of enhancing health as well as preventing or curing diseases appears to have commonality with what Ishizuka's Shokuyō Association members strove to pursue. Ōmori, however, considered the previous attempts along this line to be mere symptomatic treatments entirely based on clinical experience rather than rigorous scientific research. He defined *shokuyō ryōhō* (食養療法, dietary therapy literally) as an applied field of *eiyō* and particularly emphasized its role as preventive medicine. Ōmori regarded that even though the primary aim of pharmacotherapy was to cure diseases, dietary therapy in fact included both aspects of curative and preventive medicine, and that the importance of the latter was gaining more attention among medical professionals. He juxtaposed the German term "Diätlehre" with *shokuyō ryōhō* and stressed the new area of study of *shokuyō* was to be based on nutritional principles as well as pathological conditions.[37] Therefore, as the case of the Keiō Shokuyō Institute illustrates, even if the term *shokuyō* continued to be used, the implications and assumptions were not very far from those of *eiyō*; both discourses emphasized the increasingly dominant method of

[36] "Iyoiyo kaisetsusareru wagakuni saisho no shokuyō kenkyūjo." *Tokyo Asahi Shinbun,* November 25, 1926.
[37] Keiō Igakubu shokuyō kenkyū hen, *Shokuyō Ryōhō* (Tokyo: Tohōdō, 1931), 1-2. Historian of German organic agriculture Fujiwara Atsushi pointed out the 1920s Germany saw a boom of the term "Diät"(diet) in a sense of "dietary therapy under the guidance of physician" and the phenomenon was a product of the convergence of consumers' interest in enhancing health and the welfare state's interest in creating a healthy nation. See "Sōryokusen to shoku: Kindai nihon ni okeru shoku no jittai to poritekusu," *Minshūshi Kenkyū* 87(2014-5), 62.

the nutrient- and calorie-centered rendering of the relationship between food and the body.

Indeed, the call for placing stronger focus on theoretical investigation and experimental methodology resonated with an internal voice from Ishizuka's Shokuyō Association at the time. In a 1919 essay, one regular member problematized the dominant approach taken by the Association thus far: "in the past empirical evidence and experience could attract people's minds... With the advancement of science today, we should provide theoretically well-crafted chemical explanations" so as to refute such claims as "brown rice is less nutritious than white rice." He lamented that even though the Association once had the term "chemical (*kagakuteki*)" in its title, the journal articles had tended to contain less and less chemical analyses of food and physiology. In addition to critically pointing out this tendency, he further proposed to establish a chemical research institute within the Association, as well as to offer hands-on cooking lessons and add a monthly *shokuyō* menu section in the journal.[38] This call for a shift in focus was, in fact, already partially manifested in the changed way the benefits of unpolished rice were expounded by physicians and chemists. For instance, Tōyama Kinkichi (遠山椿吉 1857-1928) from the Tokyo Hygiene Experiment Station drew on Suzuki Umetarō's research on Oryzanin's and his own finding of *ginpisan* in rice bran to back up the anti-beriberi effect of brown rice. Army physician Nagao Shūichi too contributed by pointing out statistically that less-polished rice had a curative effect in beriberi and digestive disorders through a dietary experiment carried out in the dormitory of Atomi Girls School.[39]

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[38] Dan Takahira, "Shokuyōkai ni taisuru koe," *Shokuyō* 14-4 (1919), 50.
[39] Tōyama Kinkichi, "Genmaishoku no rieki," *Shokuyō* 92(1915), 49-52; "Hakumaishoku no heigai," *Shokuyō* 126(1918), 31-35; Nagao Shūichi, "Tōkai ni waraharetaru shokuyōhō no kōka," *Shokuyō* 14-4 (1919), 28-30. It is noteworthy that Nagai Hisomu himself, the physiologist who penned the first half of the Home Ministry Hygiene Bureau's manual, *Nutrition and Food Economy*, not only contributed to the *Shokuyō* Journal but also took on the

Nevertheless, the Shokuyō Association remained as an educational organization, focusing more on propagating Ishizuka's ways of "eating right" (*seishoku*) rather than on advancing research or conducting experiments. The internal request, which I discussed above, for setting up a research institute was never realized, even though the Association retained its clinic. Furthermore, in terms of its conceptual premises and practical guidance on dietary regimens, the Association embraced multifaceted spheres of knowledge that could not be neatly reduced to the emerging realm of *eiyō*. Much as Ishizuka's ideas of eating as a physiological, climatological, spiritual, and traditionalist act shaped the campaign of the Association since the late Meiji period, members' interests included a wide range of treatments based on chemical analysis of foods, vegetarianism, bath therapy, whole-grainism and physiognomy.

In this way, quantitative analysis and experimental methodology based on individual nutrients and calories was gaining scientific authority throughout the interwar period. However, as was shown in the multifarious characteristics of the Shokuyō Association, the process of institutionalization of nutrition science and legitimization of specific research methodologies I highlighted above did not necessarily produce a consensus on an ideal standard healthy diet for the Japanese. The next section will explore two instances of disagreements. While foregrounding these disagreements, my discussion will demonstrate how these differing views on specific dietary guidelines were commonly grounded on a sense of societal plight and looked to nutritional rationalization for its solution.

Toward Rational Eating and Budgeting

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medical advisory role for it. An editorial commentary on "Senritsu subeki yōi no goryō," *Shokuyō* 14-2 (1919), 12-14.

The 1920s saw the proliferation of the catchwords, "life (*seikatu* 生活)" and "renovation (kaizō 改造)" in government policy and social thought.[40] One example of the combination of these two concepts can be found in the government initiative for the movement for improving the quality of everyday life (*seikatsu kaizen undō*) in the early 1920s. The Ministry of Education initiated the campaign by establishing a department in charge of social education as well as by issuing a series of orders to encourage "rice substitutes," "diligence," and "frugality" in the summer of 1919.[41] The public campaign focused on propagating how to rationalize and economize the three major realms of everyday life, i.e. clothing, food, and shelter, through exhibitions in major cities, lecture series targeting at educators, and publication of books and manuals and books. A wide range of experts in home economics, medicine, nutrition, women's education, architecture, and museum took the initiative of the campaign by forming the Alliance for the Daily Life Improvement (*Seikatsu kaizen dōmeikai*) as an umbrella organization of The Ministry of Education in January 1920. Even though the campaign sought to utilize the nationwide administrative system, the main target was limited to the urban middle class, especially housewives as the "main commander" of the household's economy. The campaign leaders presupposed that the ongoing social crisis could be solved by individual's decision to rationalize lifestyle and thus improve overall quality of life. In this sense, the 1920s saw the embryonic development of social campaigns centering on the urban consumer subject.

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[40] Historian Narita Ryūchi suggested four different orientations in "social reform (*shakai kaizō*)" in the 1920s post-Rice Riots era as follows: The call for democracy (represented by Yoshino Sakuzō), the re-advancement of socialist movement, the organization of nationalist groups, and lastly, as a response on the part of the authorities to all these three streams of reform, central and local government level incorporation of social policy. Narita Ryūichi, *Taishō Demokurashī* (Tōkyō: Iwanami Shoten, 2007), 104-5.

[41] Nakajima Kuni, "Taisho-ki ni okeru 'seikatsu kaizen undō," *Shisō* (Nihon Joshi Daigaku Shigaku Kenkyūkai) 15 (1974), 61-2.

One of the key schemes espoused by the experts in the campaign was called "the new cultural living (*bunka seikatsu*)," which was widely applauded and celebrated in emerging new mass media and popular culture. The notion of new cultural living envisioned a simple, rational, and efficient lifestyle, which was often associated with Western lifestyles.[42] Morimoto Kōkichi (森本厚吉, 1877-1950), an economist and fervent campaigner of the new cultural living, put forth the concept of an "efficient standard of living" which covered both basic human necessities such as food, clothing, and housing, as well as the higher level activities for decency and comfort. Human want for decency and comfort, according to Morimoto, included broader areas of human needs beyond basic necessities such as "lighting and heating, education, society, charity, health, recreation, and saving (insurance)."[43] His concept of the "efficient standard of living" consisted of these three kinds of human wants with the category of "luxurious expenditure" being carefully excluded. Morimoto's resolute condemnation of anything "luxurious" as "unessential, superfluous, and often harmful to economic life" seems reminiscent of Max Weber's famous formulation of Protestant work ethics of sobriety and diligence. Unlike Weber, however, Morimoto was not hesitant to reveal his optimism about the process of rationalization based on such morale. By resolutely excluding human want for luxury from the concept of the "efficient standard of living," Morimoto strove to persuade his readers to adopt a lifestyle that would contribute to increasing the wealth-producing power of the nation.[44]

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[42] Minami Hiroshi and Shakai Shinri Kenkyūjo, *Taishō bunka, 1905-1927* (Tōkyō: Keisō Shobō, 1987), 247-8. One of the most conspicuous emblems of this new cultural living was *bunka jūtaku* (the culture houses) where a nuclear family presumably could enjoy a convenient and efficient Western style. After the Kanto Earthquake, the culture houses became an ideal form of housing among white-collar middle class in urban and suburban areas. Ibid, 250-252.
[43] Morimoto Kōkichi, *The Standard of Living in Japan* (Baltimore: Johns Hopkins University, 1918), 17-18.
[44] Even though the boundaries between "luxury" and "decency and comfort" seem obscure and arbitrary, Morimoto stressed negative effects of luxury and conceptually placed it on the

Needless to say, food consumption was the first consideration in Morimoto's "efficient standard of living" program. He deplored that the Japanese tended to begrudge spending money on nutritious foodstuff while willingly spending on luxurious clothing. He was against the idea of cutting down on food budget since it would eventually lead to the degeneration of the general health of the Japanese. For Morimoto, the biggest obstacle to nutritional rationalization was the unwavering adherence to traditional plain diet (*soshoku*), which centered on rice as the main staple accompanied by simple vegetable side dishes. Morimoto extensively drew on existing nutritional research on minimum requirements, calories, and vitamins. However, by deliberately focusing on introducing works undertaken by the scientists who emphasized the importance of animal protein, Morimoto underscored the importance of meat and dairy products both of which were deemed seriously lacking in the Japanese diet.[45]

In his discussion of the issues of Japanese eating habits, Morimoto maintained that such plain and nutritiously poor Japanese diet was epitomized in the "pickled radish (*takuan*)." As one of the most commonly eaten pickled side dishes, Morimoto wrote, *takuan* had little nutritional value despite having functions of increasing appetite and aiding digestion: "Due to its saltiness and harmonious flavor when accompanied with rice, a few pieces of *takuan* and a cup of coarse tea enable a person to gobble down a few bowls of rice."[46] *Takuan* was a great invention in the previous

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opposite pole of "efficiency" in life. "The effect of luxury on the individual is to discourage the spirit of steadiness and sobriety, to cause lavish expenditure in family budgets, and to undermine the health. Socially the effects of luxury are as follows: It decreases the wealth-producing power of the nation; it brings about higher prices for commodities; it increases the importation of foreign goods; it disturbs the social peace. These effects are certainly injurious to economic well-being." Ibid, 17-18.

[45] Morimoto Kōkichi, *Shin Seikatsu Kenkyū* (Tokyo: Bunka Seikatsu Kenkyūkai Shuppanbu, 1922), 435-441.

[46] Morimoto Kōkichi, *Seizon yori seikatsu e* (Tokyo: Bunka Seikatsu Kenkyūkai Shuppanbu, 1921), 188-189. According to Morimoto's survey, radish was the second most consumed vegetable in Japan and average yearly household consumption of *takuan* amounted to 238, or

feudalistic society when food resources were scarce and less diverse, Morimoto continued, yet it was not only an inappropriate food in a modern society but even harmful to health. Demonstrating his concern about overconsumption of *daikon* which habitually accompany overconsumption of rice and resultant habitual overeating, Morimoto considered the rice-centered eating habits to be one of the main causes of gastric dilatation and malnutrition that would eventually lead to lower productivity and efficiency in a modern economy.

At the center of Morimoto's nutritional rationalization, therefore, lay the benefits of a drastic increase in dairy and meat consumption. Morimoto appeared to strongly agree with Elmer McCollum (1879-1967), an American biochemist known for his study on vitamins, on how "deficient diet" could exert a decisive impact on a nation's health, culture, and even political system. Morimoto made a lengthy citation from *The New Knowledge of Nutrition* where McCollum observed:

> Those peoples who have employed the leaf of the plant as their sole protective food are characterized by small stature, relatively short span of life, high infant mortality, and by contended adherence to the employment of the simple mechanical inventions of their forefathers. The peoples who have made liberal use of milk as a food, have, in contrast, attained greater size, greater longevity, and have been much more successful in the rearing of their young. They have been more aggressive than the non-milk using peoples, and have achieved much greater advancement in literature, science and art. They have developed in higher degree educational and political systems, which offer the greatest opportunity for the individual to develop his powers. Such development has a physiological basis, and there seems every reason to believe that it is fundamentally related to nutrition.[47]

0.8 *takuan* a day. He observed that the standard of living was in inverse proportion to the amount of *takuan* consumed in a household (Ibid, 186-7). This chapter on *takuan* was somewhat hyperbolically entitled "*Takuan* Ruins the Nation" (*takuan bōkokuron*).

[47] Elmer Verner McCollum, *The Newer Knowledge of Nutrition: the Use of Food for the Preservation of Vitality and Health* (New York, The Macmillan company, 1918), 150-151.

In his own translated citation in Japanese, Morimoto switched the two phrases so that the passage would better back up his claim on the importance of meat and dairy. He used "a nation relying on the deficient food (such as the Japanese)" instead of "those peoples who have employed the leaf of the plant as their sole protective food," and wrote "those who take enough milk and meat" as a translation of "the peoples who have made liberal use of milk as a food."[48] In fact, "protective food" was another name of vitamins McCollum used throughout his book and the passage above also stressed the importance of milk as a rich source of vitamins and its positive impacts on human physiology and culture. Even though McCollum clearly stated "lacto-vegetarianism" is the most satisfactory diet in other chapter of the same book,[49] Morimoto furtively added "meat" into his translation in an attempt to emphasize the benefits of meat and diary which he deemed notably lacking in the Japanese diet.

Yet what is more striking than his twisted citation here is Morimoto's deep anxiety over "inferior" eating habits of the Japanese, habits which were held responsible for physical inferiority, shorter life expectancy, and lower level of technological advances of the nation. He readily accepted the racial perception underwritten in McCollum's observation on milk drinking and non-milk drinking nations,[50] but at the same time found the possibility for the Japanese to exit from the

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[48] Morimoto, *Seizon yori seikatsu e*, 184-5.

[49] McCollum, *The Newer Knowledge of Nutrition*, 52. McCollum stressed that neither plant based foods nor animal foods alone provide optimum nutrition. "With the exception of milk the foods of animal origin do not supplement completely the dietary deficiencies of the seeds and their products." Ibid, 81.

[50] McCollum claimed that mankind can be roughly classified into two groups by the difference in the source of vitamins in their daily foods: "One group, represented by the Chinese and Japanese and the peoples of the Tropics generally, have employed the leaves of plants as almost their sole protective food. …. The other group includes the peoples of Europe and North America and a few others. These have likewise made use of the leaves of plants, but in lesser degree, and have, in addition, derived a very considerable part of their food supply from milk and its products" (Ibid, 150). This passage precedes the above-cited paragraph by Morimoto.

lower rank and move upward to join the European and North American group by changing their diet. Morimoto revealed that when he had a conversation with Professor McCollum, he had been deeply moved by his advice that "if Japanese peasants change their diet in a way that includes much more milk and animal foods, they will probably lengthen their life spans by roughly fifteen years."[51] For Morimoto, all human beings have generally similar tastes buds despite the differences in individuality, locality, and nationality, and therefore it was merely a matter of habit and custom to change a nation's diet.[52] Eating *Takuan*, as a symbol of rice-centered diet, in this sense, was associated with the food of the past or "primitive" food, whereas meat, dairy and bread were valorized as nutritious and efficient foods.

This ardent endorsement of meat eating is reminiscent of the early and mid-Meiji beef-eating advocates who believed taking more animal protein would strengthen "inferior" physique of the Japanese. Despite this apparent similarity between the two claims, however, the Taisho-era *bunka seikatsu* campaigners like Morimoto considered westernized eating habits to be a sign of higher living standard as well as a token of scientifically proven "efficient" way of life. It is not very likely that Morimoto felt the same scale of anxiety over the "inferiority" of the Japanese body as the Meiji intellectuals professed to suffer. On the contrary, he might even have felt uneasy about the Japanese being classified into the group of "lower level of culture." By the time Morimoto wrote in the early 1920s, Japan was already transformed into a world power, having signed the Washington Naval Treaty as one of the five victorious countries of World War One. This is at the same time signaled by Japanese industries expanding their markets into China and the US, as well as the Japanese government's international debt status shifting from a debtor to creditor.

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[51] Morimoto, *Seizon yori seikatsu e*, 196-7.
[52] Morimoto, *The Standard of Living in Japan*, 61.

Therefore, the focus of dietary reform centering on the new cultural lifestyle was on how to achieve higher efficiency and productive power, rather than deriving from the apprehension over inferiority of the physique or culture. Nonetheless, just as the Meiji enlightenment intellectuals did, Morimoto embraced the logic of civilizational hierarchy with the West at its center; the only difference is that Japan now enjoyed a higher rank in the ladder. Morimoto did not conceal his desire to differentiate the "enlightened" modern Japanese and those who were not by assigning such "primitivity" and the lower standard of living to the Ainu or the "underfed vegetarian" small farmers.[53]

Morimoto's approach to "rational and efficient" foods appear to make a good comparison with another figure, who was also profoundly engrossed in exploring efficient foodways. Early on in 1915 Nukada Yutaka (額田豊 1878-1972) wrote a book entitled, *Anka Seikatsuhō* [*Economical Lifestyles*], which marked the thirty-third impression for its printing of a revised 1920 edition.[54] This book preceded all other lifestyle handbooks of a similar kind mostly published in the later years of 1910s and the immediate aftermath of the Rice Riots including the Home Ministry version discussed in the previous section. It was one of the earliest attempts to introduce social scientific understanding of the standard of living into science of nutrition. Nukada revealed that he had been impressed by a British writer F. J. Cross' book on living three pence a day and found the basic principles Cross suggested were in agreement with what he had in mind.[55] This led him to write the first edition of this book in 1915

[53] Morimoto, *The Standard of Living in Japan*, 18 and 32.
[54] Nukada Yutaka, *Anka Seikatsuhō* (Revised 33rd, Tokyo: Seikyōsha, 1920). Out of five different editions of this book, this chapter will analyze this 1920 version. Except for the last 1939 version, the basic structure and contents remained the same.
[55] Cross, F. J. *How I Lived on Threepence a Day and What I Learned from It: With Chapters on the A.B.C. of Cheap and Good Foods, Their Cost and Comparative Value*. London: Richard J. James, 1912. Cross starts this book by asking "Can a man live on three pence a day and not suffer in health and efficiency?" This book offered a positive answer based on the author's own experiment to use foods of "the highest nutritional value at the smallest cost"

when wartime inflation was looming in Japan and later in 1920 he released a revised version which covered new nutritional knowledge and reflected drastic fluctuations in food prices.[56] As a physiologist and the co-founder of the Imperial Women's Medical College (Teikoku Joshi Igaku Senmon Gakkō, f. 1925, the forerunner of the postwar Tōhō University), Nukada paid special attention to physiological effects of foods and dietary therapies for various diseases. His writings ranged from medical texts on physiological chemistry, diabetes, tuberculosis, and nephritis to historical accounts on internal disorders diagnosis. Presumably due to the success of *Economical Lifestyles*, Nukada was commissioned by the Ministry of Communication (Teishinshō) to help publish a concise booklet on basic nutritional knowledge, meal plans, and recipes in 1926.[57] Other than updating *Economical Lifestyles* with three different titles and revisions in 1926, 1931 and 1939, Nukada consistently contributed medico-dietary articles to non-medical popular magazines for a wider audience throughout the 1910s and 1920s.[58] The Shokuyō Association's journal *Shokuyō* and a separate journal *Shokumotsu no Yōjō* [Food for the Art of Life] edited by Ishizuka Sagen's son Ugen were also frequent venues for Nukada's semi-layperson readers.

Although the title *Economical Lifestyle* (1920) implies comprehensive aspects of daily budgeting, it was exclusively about economical methods related to foods and

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(preface) by purchasing seasonal ingredients in quantitiy. The sample menus and recommended shopping list included plant-based ingredients such as lentils potatoes and dates. Nukada included details of Cross' model menus as an appendix of his first edition of *Economical Lifestyle*, but removed it in the revised edition since he found it "inappropriate for the Japanese" and added the calculations of nutritional values and cost of foodstuff instead (Nukada Yutaka, *Anka Seikatsuhō,* "Preface to the revised version").

[56] Nukada Yutaka, *Anka Seikatsuhō,* 6-7.

[57] Nukada Yutaka, Teishinshō Hokenka hen, *Eiyō ryōri no kondate ni tsuite* (Tokyo: Teishin Kyōkai, 1926).

[58] Nukada Yutaka, *Eiyō keizai anka seikatsuhō* (Tokyo: Kōshisha Shobō, 1926); *Anka seikatsu nyūmon: ichimei anka kenkōshoku no torikata* (Tokyo: Katei igakusha, 1931); Nukada Yutaka and Fujiwara Akimitsu, *Zettai anka seikatsuhō: Kenkō to setsuyaku no jūsan sen seikatsu* (Tokyo: Shunyōdō shoten, 1939).

eating habits. The book comprised three parts: an introduction, the basics of nutrition, and the nutritional values of each food. One of the striking features of the book is the lengthy introduction in which Nukada illuminated the meaning of household financial hardship (*seikatsunan*) suffered by the middle class and regarded it as the key cause in the ongoing social crisis. He started by saying that this financial hardship is not only the case in Japan but also a global phenomenon wrought by a variety of modern transformations of contemporary societies such as population growth, rising standard of living, introduction of mass education and subsequent increases in laborers' demands, and the unequal distribution of wealth.[59] Nukada pointed out that especially in the context of Japan, post-WWI international politics pressured the government toward expanding its armaments and thereby leading to an increased financial burden on its citizens. Even though Nukada thoughtfully took into consideration the anticipated further hardship and complexity of precarious modern life on the part of national subjects, he ultimately endorsed the expansion of "unproductive military sectors" as an inevitable and necessary course of action for the sake of the nation's right to life (*minzoku no seizonken*).

Noticeably, Nukada did not hide the feeling of anxiety and concern over the growing financial distress that he emphatically identified as the problem of the "middle class" (*chūryū shakai* 中流社会). Financial suffering in terms of daily expenses, he stated, was not a huge problem for the upper class, while for the lower class it was a perennial issue that conditioned their life at all times. What Nukada observed as a new phenomenon was that the instances of people from the middle class suffering from economic hardship, which was particularly severe among substantially educated "salary man" classes.[60] In fact, this concern about the plight of the middle

[59] Nukada Yutaka, *Anka Seikatsuhō*, 1.
[60] Ibid, 8-19. Nukada admitted that even within the middle class people in different occupations experienced financial difficulties at different levels of intensity, but also

class was widely shared by his contemporaries, as journalists often used the expression "*yōfuku saimin*"(洋服細民 paupers in Western clothes) to refer to this class.[61] Nukada particularly stressed the peculiarity of this phenomenon by contrasting the current post-Meiji social structure with that under the previous feudal system: "What requires our special attention today is the fact that in the over forty years of the Meiji period, feudalistic power of the military (*buken* 武権) was replaced with the power of money (*kinken* 金権). Such a new power structure does not allow the presence of the middle strata as the previous *buken* did. What happens instead is that the power of money gradually disintegrates the middle class by classifying and selecting it, thereby only allowing a tiny minority of those eligible moving up to the upper strata and degrading the huge remainder into the lower strata."[62] In this sense, Nukada sharply observed the polarization effect of modern capitalism. He even warned that this trend would perhaps annihilate the middle class, eventually dividing society up into only "capitalists and laborers." In short, he considered this trend to be a dangerous threat to a society in which the middle class is supposed to support the entire nation as a solid foundation. Even though Nukada was highly wary and suspicious of socialist tenets, which had been garnering support and was thus oppressed by the authorities of the time, he professed that he could not help but agree with socialists' perturbation at the proletarianization of the middle class. The middle class, in Nukada's words, the most fundamental and "sincere" sector of a nation, was currently facing unprecedented financial hardships in their daily lives and gradually descending into a lower class. He

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suggested a criteria of the "most afflicted middle class" as average monthly income below hundred and fifty yen.

[61] Lewis, *Rioters and Citizens,* 2. As a result, a number of teachers, public workers, and policemen participated in wage disputes in the late 1910s. As was shown in the case where 150 Osaka policemen protested in August 1918, walkouts were frequently staged by policemen, waterworks employees, sanitation workers, and mail handlers in many cities. Ibid, 2-3.

[62] Ibid, 11.

diagnosed this as a profound national predicament, more dire than war, which needed to be immediately cured. As a scientist and physician, Nukada said, he felt obliged to tackle this financial hardship issue especially in relation to the most important aspect of basic human needs—food.[63]

Like many of his contemporary social reformers, Nukada sought to devise a solution to this middle class crisis on the level of individual needs. He regarded other solutions such as a tax cut, redistribution of wealth, and relief aid to be ineffective and insufficient. The most efficacious and fundamental treatment, he claimed, would be to teach individuals how to cut down on their expenses based on scientific knowledge. In other words, rather than relying on the enforcement of government measures or policy changes, Nukada turned to individual subjects' decision in their daily lives to relieve their own economic hardship. As a way of gauging the baseline of economic hardship, Nukada compared four sample cases of Japanese white-collar workers' household expenses. Drawing on the US home economist Ellen Richards's research on food cost percentage vis-à-vis household income, which ranged from 25 to 60 percent depending on the actual earned household income, he calculated average food cost of the Japanese urban middle class amounting to roughly 40 percent of total income.[64] As a physician who was keen on dietary health, he found plenty of room to improve this percentage. According to him, the most important and biggest part of household expense could be reduced by choosing nutritious foods at lower prices based on correct nutritional knowledge. He was critical of the widespread concept of the so-called nutritious food (*jiyōhin* 滋養品) such as beef, eggs, and milk, which were becoming increasingly popular among the middle class. Unlike the official Home

[63] Ibid, 35-36.
[64] Nukada Yutaka, *Anka Seikatsuhō,* 38-43.

Ministry manual, Nukada provocatively announced that these were not as nutritious as they cost.

In the chapter detailing the kinds and amounts of food required for human health, Nukada appeared to introduce up-to-date nutritional knowledge to encourage the middle class to adopt a better diet based on science. Just as Nagai and Saiki, he freely drew on Carl Voit's classic minimum requirements of nutrients as well as the Home Ministry Hygiene Bureau's standard diet, both of which were framed on the major three constituents of nutrition: protein, fat, and carbohydrates. However, unlike Nagai and Saiki who sought to introduce alternatives to expensive foods, Nukada deliberately presented such nutritional factors in such a peculiar way that served his faith in traditional Japanese foodways. For instance, Nukada insisted that even when one grasped two important factors in nutrition, i.e., the materials that constitute the human body and the required amount of heat to maintain all body functions, these two factors were not direct indications of what kinds of food a person is supposed to eat. Since the workings of the human body is immensely complicated and the combination of food ingredients and amounts depends on a myriad of conditions, Nukada stressed that one has to take into account old Japanese customs as an expression of accumulated experience over hundreds of years.

For Nukada therefore, the examples of old eating habits were respectable and logical choices that were based on empirical practice. Thus, despite people practicing them without realizing their scientific grounds, they provided scientists with legitimate subjects to reveal their underlying scientific principles. To explain this "scientific" principle, he gives the example of a woodcutter. When a woodcutter goes deeper into the forest to spend one or two months, he habitually brings some miso paste along with rice or barley. Since miso is a protein rich food, the woodcutter can unwittingly take not only sufficient amount of calories from grains but also necessary protein for

survival in a remote forest. It is through foregrounding this relation between a traditional foodway (miso), one's lifestyle (woodcutter), and one's health (sufficient protein as well as calories) that allows Nukada to emphasize the primacy of age-old eating traditions. Likewise, more recent findings on vitamins only serve to strengthen his conviction that the optimal amount of protein, fat, carbohydrates alone, no matter how well refined, cannot guarantee the complete health of the human body. This is clear when he claims that a variety of foods the Japanese people had hitherto been eating in fact contained the necessary vitamins and nutrients for such holistic health.

It is also noteworthy that what Nukada particularly stressed was the importance of the intricate relationship between the climate, soil and food. Employing the similar language to that of Ishizuka Sagen and other Meiji *shokuyō* advocates (see Chapter One), he argued that naturally abundant foods are the most appropriate source of nutrition for people living in a climate zone, and thus craving for foods from the tropical zone may prove harmful to a person living in the cold zone, and vice versa. He illustrates his point by introducing a cattle breeder's account:

> Western beef is tender while Japanese beef is tough. If we import Western cows, the meat tastes good for a while. But if we keep feeding them with local grass, the beef gets tougher without our noticing it. When the cow gives birth to a calf and the calf is fed with Japanese grass, it gives as tough meat as Japanese cows do. This has to do with climate to a certain degree, but it is mainly due to the difference of the feed. … This case may only be about cows, but the same thing can happen with all other living organisms too.[65]

Nukada claimed that even though there had been efforts to grow imported Western foodstuff such as lettuce and cabbage, they did not taste as soft as the ones grown in Western countries. Because of the above principle, he suggested that people should

[65] Ibid, 99.

pay more attention to indigenous soft vegetables such as *chisha* and *suizenjina*.[66] In other words, he stressed that the differences in climate, soil, habits, and constitution (*taishitsu* 体質) should be properly considered when introducing new customs and ideas. Just as a *nerima* daikon can grow in Tokyo while such a big daikon species cannot grow in the soil of Shikoku, Nukada stressed that the Japanese should above all rely on humble foodstuff grown in Japan instead of buying luxury so-called "nourishing" new foods. As we can see, in the case of Nukada, scientific knowledge on nutrition was therefore employed to arrange menus that maximized the merits of "nature's gifts" (*tenkei* 天恵) in the archipelago and also to demonstrate the idea that plain ingredients such as miso, tofu, *kuwai* (arrowhead) were in fact no less nutritious and nourishing than expensive Western ingredients.[67] It should be noted in passing that Nukada did not oppose meat or dairy consumption itself. Instead, he warned against middle classes' craze for such foods and denounced it as an irrational and unscientific behavior that often caused economic hardship.

Nukada presciently suggested ways of economizing the everyday diet based on scientific knowledge of nutrition along the same lines as the Home Ministry Hygiene Bureau's endeavor to promote economic efficiency of nutrition after the Riots. His book include detailed calculations of monetary and nutritional values of each major food item as Saiki Tadasu later did, and thus much of the general directions to rationalize diet concerned the methods to replace expensive meat and daily products with cheaper sources of protein such as tofu (or horse meat in place of beef) and other seasonal and commonly obtainable foodstuff. It is no surprise then that

[66] Nukada considered *chisa* and *suizenjina* as Japanese counterparts of recently imported Western vegetables, but these crops were in fact native to Europe and tropical Asia yet have been cultivated for longer time period in Japan. In this sense for Nukada, "new" Western crops were the ones imported during the Meiji period while other existing varieties were labeled "indigenous."

[67] Nukada suggested four samples of main ingredients of daily meals that would meet the standard requirements of 30-100g protein, 10-20g fat, and 450-500g carbohydrates.

the sample daily ingredients Nukada suggested centered on rice and other plant-based foods such as miso, legumes, ferns, and fish.

Although Morimoto and Nukada's practical guidelines on "rational" nutrition seem to represent two polar opposites in terms of their proposed dietary programs, they share the fundamental assumptions based on the significance of pursuing "consumption efficiency" in everyday life of the middle classes of the time. Nukada's analysis on social stratification, the collapse of the middle classes and their financial hardship was entirely consistent with Morimoto's emphasis on the role of the middle class as the representative stratum of the whole society.[68]

In a broader sense, their anxieties over the social polarization process and resultant social unrest, their turn to the reforming of lifestyle and consumption patterns resonated with other intellectuals and bureaucrats who saw "*seikatsu*" (lifestyle) as a crucial point of political and ideological intervention in the early 1920s. Uchida Kakichi (内田嘉吉 1864-1933), a bureaucrat worked for the Ministry of Communication in Japan and the Governor-General of Taiwan, used the term "*anzen daiichi seikatsu* (lifestyles placing security as the number-one priority)" in a similar manner. Uchida interpreted the Rice Riots as the eruption of laborers' anger against capitalists and called for attention to such collective psychology caused by rapid economic transformations and the resulting financial hardship on the shoulders of wage earners. The pursuit of "security" in everyday life, in Uchida's sense, was expected to be realized through changes in eating habits, clothing, shoes, banking, life insurance as well as reliance on police and legal procedures.[69] Both Morimoto and Nukada likewise perceived the food problem as one of the most critical security issues

[68] Morimoto Kōkichi, *Seizon yori seikatsu e*, 8. Morimoto argued that the middle class should become a "standard class" (*hyōjun kaikyū*), which would pursue the improvement of its members' lives and would simultaneously form alliances with upper and lower classes.
[69] Uchida Kakichi, *Anzen Daiichi Seikatsuhō* (Tokyo: Bunhōsha, 1919).

that necessitated solutions based on the application of socio-economic and medico-scientific knowledge at the everyday level. Such "scientific grounds" were expressed in numerical terms, particularly those indicate the optimally efficient combination of protein, calories, and corresponding cost, which was made possible with the help of increasingly institutionalized and systematically produced knowledge of *eiyō*.

The shared goal for "efficiency" in life and an approval of quantitative methodology on nutrients, however, did not guarantee an agreement in determining ideal foodways, as Morimoto and Nukada's contrasting claims demonstrated. One of the points of discussion on eating habits often revolved around the issue of protein requirements and the related problem of meat consumption due to its supposedly higher nutritional values yet relatively higher price. In the post-riots milieu, scholars and bureaucrats such as Saiki Tadasu sought for cheaper alternatives to meat, but this did not rule out the assumption of meat as protein-rich, nutritious, and thus superior food. As Morimoto's request for the lowering of the price of meat and dairy (in order for a wider population to readily consume them) revealed, meat eating was laden with the positive cultural and scientific meanings and was particularly associated with modernity. Yosano Akiko, a prominent feminist poet and writer, wrote that the Japanese should spend more money buying this "modern food," even at the expense of reducing budgets on clothing or housing.[70]

At the same time, the contemporary medical discourse aimed at formulating a rational and economical diet more often questioned the validity of the standardized requirements as well as the protein-centered approach itself. Nagai Hisomu's vague suggestion of the minimum protein requirement and Nukada's outrageously wide range of 30-100 gram per day requirement betrayed how indeterminate and equivocal the issue was at the time. It was not uncommon for medical professionals to provide

[70] Yosano Akiko, *Hito oyobi Onna toshite* (Tokyo: Tengendō, 1926), 25-27.

critical views on excessive protein intake, or meat eating, not only because of its cost-ineffectiveness but also due to its presumed potential detriment to health by increasing acidity level in blood. Miyairi Keinosuke (宮入慶之助 1865-1946), one of the leading parasitologists of the time, viewed the protein-centered perspective as an outdated nineteenth-century "myth," and recommended a minimum intake of animal protein.[71] Deeply impressed by the Danish physician Mikkel Hindhede's protein minimum experiment and its successful application during the wartime blockade, Miyairi called into question the validity of the existing minimum requirement values which were determined based on the 19th century manual workers in Munich. He labeled the then orthodox German biochemical theories formulated by Liebig, Voit, and Rubner as "old nutrition science" and attributed Germany's failure in wartime food management to their flawed theories.[72] For the "right" way of eating, Miyairi urged, Japanese scholars and laymen alike should learn from German's failure and Denmark's success.

As I have examined in this chapter, with the rise of nutrition science throughout the 1920s, the concepts and language to address the issues of food and health increasingly came close to basic elements in nutrition science we are familiar with today: calories, protein, carbohydrates, and vitamins among others. Another crucial dimension added during and after the wartime inflation and the resultant Rice Riots was the cost-effectiveness of food items. The new area of research and discipline of *eiyō*, in this sense, was grounded in the attempts to pursue optimally efficient intake of indispensible nutrients at the lowest cost. In line with this institutional development of nutrition science to cope with the "food problem" of the 1920s was also the urgent need to popularize new nutritional knowledge across wider sectors of society. As I have shown, this new role of nutrition science was encapsulated in Saiki Tadasu and

[71] Miyairi Keinosuke, *Tabekata Mondai* (Tokyo: Nanzandō shoten, 1923), 154-6.
[72] Miyairi Keinosuke, *Zoku: Tabekata Mondai* (Tokyo: Nanzandō shoten, 1924), 3-12.

the National Institute of Nutrition Research's formulation of *eiyō* and their efforts to advance nutritional research and education as a "social policy." In a similar vein, economists, nutritional scientists, experts of women's education, and physicians strove to persuade middle classes consumers to make "rational" choices with regards to their food items and cooking methods. Campaigning for rational and efficient eating habits, therefore, was one of the most important areas of lifestyle reform (*seikatsu kaizen*) whereby middle classes' financial hardship could be ameliorated and thus further social upheavals similar to the Rice Riots could be preempted.

Such an incorporation of nutritional knowledge into the socio-engineering of middle class eating habits went hand in hand with the process of the institutionalization of *eiyō.* A proliferation of the study of *eiyō*, or nutrition science, also implied that quantitative data and reproducible laboratory experiments increasingly gained scientific authority over knowledge derived from an individual's experiences, old folk customs, or simply intuitive and empirical observations. In light of this, physicians and educators who had advocated Ishizuka Sagen's *shokuyō* regimen also sought to refashion their claims on the benefits of brown rice to "rationally" champion its health efficacy and economic benefits. They relied on the newer knowledge of vitamins and rice bran's efficacy against beriberi as the prime rationale behind unpolished rice consumption. Likewise, as though in pursuit of theoretical grounds for the then underestimated "low-protein, plain, and austere Japanese diets," they looked to Europeans' experience of wartime food shortage and resultant newer experiments on minimum protein requirement. Nonetheless, not all *shokuyō* advocates followed this trajectory. Even though the 1920s saw rapid institutional and methodological developments in nutrition science, this transformation did not exhaustively invalidate the legitimacy or practical efficacy of dietary advice outside of this realm. The following chapter looks how a faction of Ishizuka's

"natural" eating backers branched out into a new form of alternative medicine in the 1930s.

CHAPTER THREE

TOWARD A NEW ORIENTAL "NATURAL MEDICINE": SAKURAZAWA YUKIKAZU, 1930-1940S

In 1938 Miki Kiyoshi, one of the well-known Kyōto-school philosophers in prewar Japan, identified the philosophical foundation of traditional *yōjō-ron* (theory of nurturing life) with the following term: "natural philosophy" (*shizen tetsugaku*). As a philosopher, Miki adroitly drew a feature of being "natural" from *yōjō-ron* and then extended this characteristic—without giving much explanation—to discuss a more general concept of "natural philosophy." He further characterized what he called "natural philosophy" by making an interesting comparison with the philosophy of modern science. According to Miki, the sense of inadequacy is a driving force behind modern science's ceaseless inventiveness (*hatsumeiteki*); by contrast, the sense of self-possession behind "natural philosophy" is to be explorative (*hakkenteki*). Using this juxtaposition as an analogy, Miki then goes back to explicate the meaning of *yōjō-ron*. Like science, modern medicine began from the absence of health (i.e. disease) and thus must invent cures. On the other hand, *yōjō-ron* like natural philosophy, is an exploration on the ways in which to maintain health that one already and intrinsically possesses.[1]

This additional comparison between "inventive" and "explorative," each of which was attributed to the features of scientific and natural philosophies, respectively, drops a hint for readers to make out the meaning of "natural" here. "Nature" in his usage does not necessarily mean the physical world as the English term "nature" usually refers to, as in the instance of natural science; rather, Miki's

[1] Miki Kiyoshi, "Jinseiron nōto," *Miki Kiyoshi Zenshū 1* (Tokyo: Iwanami shoten, 1966), 208-209.

"nature" is closer to another more classical meaning of the term *shizen* holds, "spontaneity" or "self-so," not as a noun but as an adverb.[2] In other words, Miki seems to emphasize the artificial, interventional and man-made aspect of modern science and medicine, while setting *yōjō-ron* apart from such characteristics by attaching the label of "*shizen*" to it. Although this passage was part of his brief discussion of the meaning of health for the general reader, Miki's characterization of *yōjō-ron* pointedly demonstrates how the conception of *shizen*, with its dualistic meaning, was instinctively and unhesitatingly attributed to the traditional (such as *yōjō-ron*), allocated far away from the modern (such as science).

This chapter discusses another striking instance of such usage of *shizen* in the domains of medicine and health. The *shokuyō* campaign in the 1930s was transformed into a health movement with a broader focus on health, the human body, and one's worldview. At the center of the activities and theorization was a new leader of the Shokuyō Association, Sakurazawa Yukikazu (桜澤如一 1893-1966). In this chapter, I will first trace how Sakurazawa sought to articulate his own interpretation of the *shokuyō* doctrine by framing it as "Oriental medicine." Upon doing so, I will then move to discuss how he participated in the broader 1930s critique of modern medicine.

Making a New Hybrid: *Shokuyō* as Oriental Medicine

In a concise column titled "A Brief History of the Shokuyō Association" published in June 1940, the editorial board of the Shokuyō Association's official journal delightfully celebrated the flourishing of its public campaigns after the

[2] According to Yanabu Akira, *shizen* contained two somewhat overlapping yet distinct meanings: one as the translation of English "nature" in the sense of the physical world; the other as the older meaning of "as it is"(*onozukara*) in the sense of Laozi's maxim "人法地，地法天，天法道，道法自然." Yanabu Akira, *Honyakugo seiritsu jijō* (Tokyo: Iwanami stoten, 1982), 125-148.

outbreak of the Second Sino-Japanese War in 1937. Calling the phenomenon "the third apex" of the *shokuyō* movement since its establishment in 1907, the writer of the column emphasized the significance of a twofold role to be undertaken by the Association in the ongoing total war: to fundamentally cure the patients that modern medicine could not treat and to put an end to the overall deterioration of the physique and spirit of the Japanese. To respond to the heightened popularity and publicity, the article boastfully explained that the Association had enhanced its organizational structure and established a new headquarters equipped with twenty medical specialists and ten administrative staff (at Mizuho Hospital), in addition to the new "natural foods" distribution unit (*Nihon Shokuyō Kenkyūjo*) in Tokyo.[3] As of January 1917, the total number of members was no more than 3,000 with only three official local chapters in Yokohama, Kyōto, and Nagoya; in 1937 its membership grew to more than 10,000.[4] The new member list for the month of August 1941 showed its wide regional diffusion of membership ranging from Tokyo, Osaka, Kyoto, Hokkaidō, and 26 prefectures, extending to colonial Taiwan and Korea.[5]

In narrating its recently burgeoning activities, the column notably credited Sakurazawa Yukikazu with revitalizing the *shokuyō* campaign, not only by laying the theoretical and philosophical foundation of the Way of *shokuyō*, but also by propagating it to wider sectors of society.[6] Sakurazawa who initially took an advisory role was then elected president of the Association in 1937. As the de facto head, he took a central role in reorganizing the Association, while actively setting up new

[3] The editorial department, "Honbu no shigoto," *Shokuyō* 34-6 (1940), 59-61.
[4] "Shokuyōkai no shushi narabi ni soshiki henkō no riyū," *Shokuyō* 127 (1918), 27; Nihon CI Kyōkai, *Arubamu George Ohsawa* (Nihon CI Kyōkai, publication year unknown), 11.
[5] "Shinnyū kai'in meibo," *Shokuyō* 35-10 (1941), 59-61. The total number of 167 new members joined in this month with the largest number of 59 from Yamagata Prefecture.
[6] The editorial department, "Honbu no shigoto," 60. According to the column, Sakurazawa also directed Prince Kuni Asaakira (brother-in-law of Emperor Shōwa) to follow the *shokuyō* regime in this period.

shokuyō education initiatives. His best-selling book, *The New Shokuyō Therapy: The Diet that Cures Diseases* (*Shokumotsu dakede byōki ga naoru shin shokuyō ryōhō*), was reprinted forty times during the first three months in 1939 and reached its sixty-third printing in 1941.[7] Given that the Association's activities had been mostly limited during the previous decades to individuals from upper class and elites through personal networks, the setting up of a new headquarter compounded with the popularity of Sakurazawa's book meant that the late 1930s certainly was a high point of the Association's activities both in terms of its rapid expansion in organization, manpower, and publicity.

Unlike previous leaders in the *shokuyō* movement, Sakurazawa did not receive formal medical education, nor did he come from a health-related professional career.[8] However, like most other advocates, he underwent a formative firsthand experience through which he came to devote himself to the doctrine of *shokuyō*. Sakurazawa first encountered Ishizuka Sagen's *shokuyō* theory in his late teens after years of suffering from intestinal and pulmonary tuberculosis. Sakurazawa came across Ishizuka's book in a library and changed his daily diet following Ishizuka's theory. According to his own account, he recovered from the diseases shortly afterward and this self-experiment gave him an "eye-opening" first-hand experience through which he realized the importance of dietary regimes. Upon recovery, he entered the Kyoto City First Commercial School to conform to his father's wishes, even though he had aspire to study literature at university. Upon graduation in 1913, he went through several short-term careers in Kōbe, including a rice import company, a fishing business as well as steamships crossing the Indian Ocean during the First World War. During his

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[7] Sakurazawa Yukikazu, *Ningen no Eiyōgaku oyobi Igaku* (Tokyo: Dai Nihon Hōrei Shuppan, 1939), 321; "食物だけで病氣が癒る新食養療法," NDL Online Catalog, accessed January 26, 2017, http://iss.ndl.go.jp/books/R100000001-I060957700-00?ar=4e1f&locale=en.
[8] On Sakurazawa's biographic information, see Nihon CI Kyōkai, *Arubamu George Ohsawa*, 8-13 and Matsumoto Ichirō, *Shokuseikatsu no kakumeiji* (Tokyo: Chisan shuppan, 1976).

early career, he also improved his French language skills by attending Kōbe French Language School for one year. From around 1925, just about the time he moved to Tokyo, he stopped his careers in business in order to actively participate in the *shokuyō* movement as well as the Japanese script Romanization movement.

This latter activity for the Romanization movement was a lesser-known part of his interests, although Sakurazawa recalled it to be one of his two lifetime enterprises.[9] The advocates of the Japanese script Romanization movement argued that Roman characters should be used to transcribe Japanese instead of *kanji* (Chinese characters) or *kana* (phonetic and syllabic Japanese script). This idea emerged as part of Japanese script reform movement in early Meiji period, and was upheld by many politicians, educators, and scientists throughout the prewar period and even after 1945. Sakurazawa took part in The Nippon Romanization Society (日本のローマ字社) led by Tanakadate Aikitsu (田中舘愛橘, 1856-1952) and Tamaru Takurō (田丸卓郎, 1872-1932) in the late 1920s. It is not clear what role Sakurazawa exactly played in the Romanization movement, but he seems to have been involved in some activities on his own in Kōbe prior to his move to Tokyo and subsequent formal participation in the Nippon Romanization Society in 1925. He published a monthly journal for Romanized Japanese literary works, *Yomigaeri*, between 1919 and 1924, and also translated the poems by Charles Baudelaire (*Nayami no Hana,* Publisher unknown, 1920) and Georges Rodenbach (*Te no Sudi*, Kōbe: Yomigaeri no ie, 1922) into Romanized Japanese script.[10]

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[9] Nihon CI Kyōkai, *Arubamu George Ohsawa*, 8.

[10] It is also noteworthy that Tanakadate was a geophysicist who contributed to early aeronautics in Japan. Little evidence has been found to show how and to what extent Tanakadate influenced Sakurazawa. However, Sakurazawa might have come into contact with Tanakadate or other natural scientists engaged with the Nippon Romanization Society in his early years in Tokyo. He also maintained an interest in aviation and later patented French engineer Henri Mignet's light aircraft Pou du Ciel (*Sora no Shirami*, or Flying Flea) in Japan in 1935 (Nihon CI Kyōkai, *Arubamu George Ohsawa*, 11).

It may seem odd that Sakurazawa was involved in the Japanese script Romanization movement, considering that the *shokuyō* movement, from its inception in the late Meiji period, was strongly imbued with cultural nationalism that valorized "Japanese traditions." As intellectuals like Nishi Amane (西周, 1829-1897) famously argued for the Romanization of the Japanese writing system, the idea of adopting the Roman alphabet was inextricably linked with the early Meiji social reform toward Westernization and enlightenment. Indeed, the first wave of the Romanization movement retreated when the critical re-evaluation of the early Meiji Westernization process and the rise of conservative cultural nationalism that occurred in the 1890s.[11] Nonetheless, it would be misleading to simply equate the Romanization of Japanese with total Europeanization or the eradication of Japanese culture. Tanakadate, the leading figure in the Japanese-style Romanization movement throughout the interwar period, stated in the early 1930s that the Romanization of Japanese is the process of "Japanizing" the Roman alphabet by using it in accordance with Japanese pronunciation.

By drawing on recent phonological research of Nikolai Trubetzkoy (1890-1938) as well as the Japanese classics scholar Motoori Norinaga (本居宣長, 1730-1801), Tanakadate claimed that the Japanese-style Romanization system, as opposed to the Hepburn style, was the most "scientific" script system that does not distort each phoneme of Japanese language. Moreover, he even considered the Japanese language to be as linguistically simple and efficient as Esperanto with the hope that it could function as an international language for scientific research, as well as international

[11] More importantly, the demise of the early Meiji Romanization movement was also caused by the issue of style, since the Romanization systems of the time did not follow spoken Japanese but rather adhered to old Classical Chinese-reading style (*kanbun kundoku*). The unification of spoken and written language (*genbun itchi*) was a predominantly overarching issue regardless of writing systems. Yi, Yŏn-suk. *"Kokugo" to iu shisō: kindai Nihon no gengo ninshiki* (Tōkyō: Iwanami Shoten, 1996), 38-39.

telegraphic communication. Given that the strong emphasis placed on "simplicity" and "science," it was not a coincidence that natural scientists, especially physicists like Tanakadate, led the second wave of the Romanization movement from the 1920s onward. The scientists endorsed it on the grounds that Romanized Japanese script was easy to learn, appropriate for typewriting, and convenient for international research exchange.[12]

The conceptualization of this "scientific" method as a universally communicable writing system was particularly encouraged later in 1942, when Tanakadate issued an advisory opinion on the occupation policy toward the Southeast Asian natives who were more familiar with the alphabet than *kanji* or *kana*. In other words, the use of the Romanization of Japanese was championed, ironically, in order to more widely disseminate Japanese (more exactly, *kokugo*, or national language) and further spread the "Japanese spirit (*nihon seishin*)."[13] Tanakadate's Japanese-style Romanization script, in this sense, was expected to function as a scientifically designed phonographic writing system and as the most efficient means to convey the Japanese ethos by way of accurately delivering Japanese phonemes.[14]

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[12] Sugiyama Shigeo, "Kagakusha tachi no sentaku: Rōmaji undō no rekishi ga kagakugijutsu komyunikeishon ni shisa suru mono," *Japanese Journal of Science Communication* 3(2008), 70-73 and 75-6. The Japanese style Romanization (*Nihon-shiki*) orthography uses the same consonant that combines with five vowels in the same row. For example, "た・ち・つ・て・と" are transcribed as "ta, ti, tu, te, to." In contrast, the Hepburn Romanization (*Hebon-shiki*) follows English phonology of Japanese, so the above syllables are rendered to "ta, chi, tsu, te, to."

[13] Ibid, 77-78. There were other factions of the Romanization of Japanese script movement that took the opposite political orientation. For example, a group of communists and anarchists were involved in the Romanization and Esperanto movements, which came under the authorities' oppression between 1936-8. Ōshima Yoshio and Masao Miyamoto, *Hantaisei esuperanto undōshi* (Tōkyō: Sanseidō, 1974), 215-221.

[14] It was not coincidence that Tanakadate drew on Motoori Norinaga to advance his phoneticism. According to Naoki Sakai, ideographic and phonetic principles coexisted in various text styles until the eighteenth century. Motoori Norinaga was one of the eighteenth-century *kokugaku* (National Studies) scholars who newly adopted "pure" phoneticism and clear dichotomy between ideography and phoneticism. Norinaga interpreted *Kojiki*'s phonetic orientation as a demonstration of authentic antiquity based on the sound. See Naoki Sakai,

It is important to note that these seemingly contradictory, yet reasonably compatible ideas of internationalism and Japanism are nested in the Japanese style Romanization movement with which young Sakurazawa actively occupied himself. In this sense, Tanakadate's consistent stance toward universalism and nationalism neatly resonated with Sakurazawa's ideals of pushing the *shokuyō* theory to the extent of internationally applicable principles of preserving health. This tendency was strengthened to an even greater degree throughout the 1930s and early 1940s when he increasingly reformulated Ishizuka's late Meiji *shokuyō* tenets into Natural Medicine (*Shizen Igaku*) with a new focus on Japanese sprits.

Sakurazawa's rendering of the *shokuyō* theory started with the publication of three early works between 1927 and 1928: *The Physiology of Japanese Spirits* (Nihon seishin no seirigaku); *A Biography of Ishizuka Sagen* (Denki Ishizuka Sagen); and *The Principles of Shokuyō* (Shokuyōgaku genron).[15] Although Sakurazawa remained a prolific writer through the 1930s and 1940s, these three books contained most of his foundational ideas on Ishizuka Sagen and the *shokuyō* theory that he put forth thereafter. In the Preface of *The Physiology of Japanese Spirits*, Sakurazawa revealed that this book was a commentary on Nishihata Gaku (西端学, ?-1934)'s two diagrams on the *shokuyō* principles.[16] Although he regarded Nishihata as his mentor, not much is known about Nishihata other than the fact that he had been placed in the reserve list in 1894 as a lieutenant commander from the Imperial Army Cavalry and had written

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Voices of the Past (Ithaca, NY: Cornell University Press, 1991), 251-258. In this sense, Tanatadate seems like a twentieth-century successor of Norinaga's phoneticism, now with the Roman alphabet not with Chinese ideographs.

[15] Nishihata Gaku and Sakurazawa Yukikazu, *Nihon seishin no seirigaku*, Tokyō: Shokuyokai Jigyōbu, 1927; Sakurazawa Yukikazu, *Denki Ishizuka Sagen*, Tokyō: Shokuyōkai, 1928; Sakurazawa Yukikazu, *Shokuyōgaku genron*, Tokyō: Shokuyōkai, 1928. *Shokuyōgaku genron* was a collection of the following five volumes with the total page numbers reaching 1700: An Introduction; The Principles; Therapies I and II; and A Cookbook.

[16] Five diagrams are attached following the Table of Contents, yet it is not clear which ones are the "two diagrams" Sakurazawa learned from Nishihata.

about military horse riding and management before he become involved in The Shokuyō Association. In the 1910s, Nishihata frequently contributed to the journal *Shokuyō*, in which he not only expounded on Ishizuka's writings and provided chemical analyses of food ingredients, but also explored topics regarding physiognomy and climatology in relation to food consumption and health.[17] He claimed that an earlier exploration into the interrelatedness of features, mind, food, and illness was undertaken by Mizuno Nanboku (水野南北, 1757-1834) and Yokoyama Marumitsu (横山丸三, 1780-1854). Interestingly, Nishihata credited Ishizuka Sagen with further developing this theme by way of incorporating the treatments in accordance with climate and soil (*fūdo*).[18]

In *The Physiology of Japanese Spirits*, Sakurazawa presented a climatological understanding of the natural environment as the center of the *shokuyō* theory and practice. Here, he introduced one of the key concepts in the *shokuyō* program, *Shindo Fuji* (身土不二, literally "body and soil inseparable") as the principle that enabled human adaptation to different climate zones and seasonal changes over time.[19] Drawing on the Confucian trope of *ten*, *chi*, and *jin* (天地人, heaven, earth, and human), he laid out the characteristics of different climate zones and how humans have acclimated themselves to different natural environments. Accordingly, there are

[17] In the 1910s Shokuyō Journal had a broad range of discussions on food, health, and morality from diverse perspectives, ranging from the benefits of half-polished rice, traditional foodways, specific ailments and their treatments, to moral implications of "right eating." Although there were some discussions directly related to Sino-Japanese medicine, little reflections on physiognomy or divination presented other than by Nishihata's. Such contributions included "Shokuyōhō to seisōgaku"[The Shokuyō theory and physiognomy] *Shokuyō* 58 (1912), 7-11; "Shokuyōhō to tōkyūjutsu"[The Shokuyō theory and divination] *Shokuyō* 59 (1912), 7-9; "Jinbutsu wo mite shokuyōhō wo toke"[Teach the principles of shokuyō after observing a person]; *Shokuyō* 62 (1912), 38-9.
[18] Nishihata Gaku, preface to *Denki Ishizuka Sagen*, by Sakurazawa Yukikazu, 6.
[19] Even though he mentioned in passing the term was from Buddhist texts, Sakurazawa made no mention of the original meaning of the term and how they transformed its meaning for their own *shokuyō* doctrine.

four climate zones on the globe, which can be characterized as polar (*kan*, or cold), cold (*rei*, or cool), temperate (*on*, or warm), and tropical (*netsu*, or hot) zones respectively. Dividing lines are drawn by the degree of seasonal changes: the polar zone has only two seasons a year, summer and winter; the cold zone has one long winter, a short spring and summer, yet no fall season; the temperate zone has roughly 91 days each for spring, fall, and winter, respectively, and slightly longer summer that lasts for 92 days; the tropical zone has summer all year round. The polar zone is characterized by "extreme yin" nature and thus, Sakurazawa explained, people living in this zone should balance out the body and the environment by partaking in yang-rich animal based foods, as well as by wearing animal fur clothing. The same logic was extended to the tropical zone, where it is natural for people to eat more fruits, which is deemed yin by nature, to counteract excessive yang energy emitted by the sun. The *Shindō Fuji* principle, he stressed, was the principle humans have applied in their daily lives to conform to the natural environment by properly choosing foods that are conducive to maintaining the yin-yang equilibrium in the body.[20]

In a sense, Nishihata and Sakurazawa extended Ishizuka Sagen's older ideas on the potassium-sodium balance in the body in accordance with seasonal and geographic variances. In his 1896 book *A Treatise on Chemical Diet and Longevity*, Ishizuka explained a high cholera incidence in coasts or waterways as an instance of diseases that are caused by excessive flows of sodium.[21] Like many of his contemporaries, Ishizuka did not entirely endorse bacterial pathogenesis of cholera; instead, he emphasized the multifaceted pathogenesis, particularly environmental

[20] Nishihata and Sakurazawa, *Nihon seishin no seirigaku*, 14-28. To stress the imperative nature of this "natural law," the authors argued that the four zones are the manifestation of heaven's decree (*tenmei*) and the corresponding features could be found on earth as the earth's order (*chirei*). In this deterministic picture, the role of humans seems passive and submissive, since they were merely supposed to follow these laws (*jinjū*). Ibid, 18 and 20-21.
[21] Ishizuka Sagen, *Kagakuteki Shokuyō Chōjuron* (Tokyo: Hakubunkan, 1896), 374-5.

effects such as climate and geography. While Ishizuka somewhat crudely designated two representative climates as the sodium-rich coast and potassium-rich inland regions, Nishihata and Sakurazawa elaborated on this earlier conceptualization by adding four climatic zones and seasonal changes in a broader scale across the globe.

Furthermore, they toned down Ishizuka's potassium-sodium theme in a noticeable way and instead strengthened the metaphysical principle of the yin-yang balance by drawing on Chinese classic texts. By frequently quoting short verses from *The Yellow Emperor's Classic of Internal Medicine* (*Huangdi Neijing*) to their advantage, the authors particularly stressed that such great wisdom was accurately observed and recorded thousands years ago in the East. In discussing the principle of balancing out bodily yin-yang energy in accordance with outer seasonal changes, they borrowed the phrase from *Huangdi Neijing*'s *Basic Questions* (*Suwen*): "the yin and yang of the four seasons, they constitute root and basis of the myriad beings." The change of four seasons is the manifestation of the ever-changing flow of energy in the world, they explained, and yin and yang were the driving force behind it.[22]

Nonetheless, despite their professed reverence for the Classics like *Neijing* and age-old philosophical traditions, Nishihata and Sakurazawa did not delve much into the core medico-philosophical doctrines beyond this much cited yin-yang axiom. Rather, they selectively adopted some ideas or at times even made arbitrary interpretations of specific phrases in a way that served their *shokuyō* tenets. For instance, although the four climate zones as a modern geographic concept were never present in *Suwen*, they seems to have inappropriately attributed the categories of four climate zones to it.[23] People in China, they claimed, identified the features of heaven

[22] Nishihata and Sakurazawa, *Nihon seishin no seirigaku*, 58. The cited translation is from Paul U. Unschuld and Hermann Tessenow. *Huang Di Nei Jing Su Wen: An Annotated Translation of Huang Di's Inner Classic – Basic Questions: volume 1* (Berkeley: University of California Press, 2011), Chapter 2-13-6, 55.
[23] Nishihata and Sakurazawa, *Nihon seishin no seirigaku*, 13.

and earth five thousand years ago and divided the earth into four representative climate zones. Given that topographical remarks in *Suwen* refer to relative directions such as east, west, south and north rather than dividing the globe under any absolute geographic criteria, it is fair to say that the authors sought to fuse their knowledge on earth science and geography available at the time into the framework of what they regarded as "Oriental medicine" without exact reference.

The two leaders of the *shokuyō* movement also found strong grounds in *Suwen* to legitimize their emphasis on daily foods over medicine in therapeutic efficacy. They made an unusual lengthy citation from *Suwen* in which poison contained in drugs is discussed:

"Among the illnesses are those which are chronic and those which were newly acquired;
among the prescriptions are those that are large and those that are small.
[Among the drugs] are those that have poison and [others that] have no poison.
[In their application] it is definitely necessary to follow the regular compositions.

If an illness is treated with [drugs of] massive poison, remove six [parts] of ten.
If an illness is treated with [drugs of] regular poison, remove seven [parts] of ten.
If an illness is treated with [drugs of] weak poison, remove eight [parts] of ten.
If an illness is treated with [drugs] containing no poison, remove nine [parts] of ten.
Employ a diet of grain, meat, tree-fruit, and vegetables to complete [the cure].[24]

Nishihata and Sakurazawa quoted the passage above with a drastic twist of the last line as follows: "Only by appropriately employing a diet of grain, meat, tree-fruit, and vegetables [*shokuyō wo tadashiku suru*] can one effectively eliminate the remaining one part of poison."[25] Even though the original text also contains a warning against

[24] Paul U. Unschuld and Hermann Tessenow. *Huang Di Nei Jing Su Wen: An Annotated Translation of Huang Di's Inner Classic – Basic Questions: volume 2*, Chapter 70-455-2, 353-354. The following lines read, "Do not permit these [limits] to be exceeded, lest the proper [qi] is harmed" (354).
[25] Nishihata and Sakurazawa, *Nihon seishin no seirigaku*, 58-59.

excessive use of drug and the role of proper diet to "complete the cure," the passage does not necessarily mean all poison included in drugs should be eliminated. On the contrary, it seems more concerned with how to carefully follow well-established conventions and treat illnesses using varied degree of toxicity contained in drugs to the extent that its use would not adversely affect the vitality of the body. In the context of Nishihata and Sakurazawa's discussion, however, the harmful "side effects" of drugs were deliberately highlighted while therapeutic effects being ignored, and the use of drugs was labeled as a form of "symptomatic treatment" (*taishō ryōhō*), which was deemed to be a non-fundamental remedy. Ultimately, they contrasted drugs' "unnaturalness" with the "naturally" curing effects of appropriate foods as if food therapy or *shokuyō* was the only innocuous and efficacious means of treatment.

It is worth noting here that although the authors changed the last part of the passage in order to introduce their claim of food-over-drug approach, it cannot be said that their interpretation was a sheer fabrication. Indeed until the mid-nineteenth century, it was not altogether uncommon that dietary regimes or specific food ingredients played a central role in therapeutics and general hygiene in most of medical traditions. Therefore, they could have found countless instances from diverse sources that highly value the significance of diet for preserving health and curing illness, ranging from the Hippocratic Corpus to the eighteenth-century European iatromathematical principles of diaetetick management.[26] Still, what was peculiar in their *shokuyō* principles was the way they sought to construct therapeutic and cultural authenticity by having recourse to Sino-Japanese (Kampo) classical texts such as *Suwen* in a way that linked Oriental medicine to the idea of "natural" therapy. This is perhaps the reason why Sakurazawa, in his later writings, continued to use the excerpt

[26] Various, *Hippocratic Writings*, ed. G. E. R. Lloyd, trans. J. Chadwick, Revised ed. edition (Penguin Classics, 1984); Bryan S. Turner, "The Discourse of Diet," *Theory Culture & Society* 1, no. 1 (1982): 23–32.

above in order to deliberately place Oriental medicine on the position of superior doctrines compared to then prevalent modern biomedicine. In his 1936 book *Eki* (*yi*, or changes), Sakurazawa introduced one more similar passage from classical Chinese *materia medica* to illustrate how ancient Chinese divided drugs into three categories of upper, middle, and lower ones: upper drugs (*jōhin*) are efficacious without toxins; middle drugs (*chūbon*) are efficacious yet at times toxic; lower drugs (*gehin*) are toxic substances that are used to attack other toxins. Upper drugs, he explicated, are mostly "traditional and natural foods" we eat on a daily basis, while "Western drugs" mostly belong to the grade of lower drugs.[27] One can easily see here how Sakurazawa and Nishihata appropriated specific piece of information of Kampo medical texts in a way conducive to their claims of "Oriental" medicine being natural and thus allegedly superior to its Western counterpart.

Sakurazawa's understanding of the *shokuyō* rationale, in this sense, demonstrates a radical break with that of Ishizuka Sagen. As I have discussed in Chapter Two, even though Ishizuka was critical of the tendency at his time in which he regarded most scientists, in discussing dietary health, paid little attention to minerals compared to other so-called major nutrients, his assertions did not necessarily involve the intention to put forth an oppositional stance against scientific medicine. Ishizuka also frequently mentioned relevant snippets from Confucian and Sino-Japanese medical texts, but those were mostly either to emphasize the importance of Confucian moral cultivation, or to draw on practical suggestions on prolonging life in relation to his potassium-sodium theory rather than to assert the superiority of Oriental medicine in general. In Sakurazawa's eyes, however, Ishizuka was seen as a pioneer in

[27] Sakurazawa Yukikazu, *Eki: banyū konpon musō genri* [Changes: the universal principle] (Tokyo: Shokuyōkai, 1936), 123. In a similar vein, Sakurazawa added the Confucian scholar-doctor Nakae Tōju (中江藤樹, 1608-1648)'s words: "Small drugs include decoctions, acupuncture, and moxibustion; medium drugs refer to grains, meat, vegetables and fruits that nurture life; big drugs means cultivating the body and high virtues."

reviving the essence of traditional Oriental medicine by way of using some new analytical elements from Western science, more specifically, chemistry. Although Ishizuka never alluded to the inferiority or superiority of Western medicine nor did he seem to buy into the idea of such dichotomous category, Sakurazawa relegated the role of modern chemistry to an instrumental function in expounding the old wisdom in Ishizuka's *shokuyō* theory. At the center of such "valuable old wisdom" was the yin-yang scheme that Sakurazawa and Nishihata recognized as the essences of the natural order of things. Sakurazawa highly valued Ishizuka's discovery of the potassium-sodium pair and their mutually antagonistic and complementary operations in the human body. In particular, he appreciated how Ishizuka had likened the potassium-sodium pair to the male-female sexes, which had long been associated with the yin-yang set in East Asian traditions.[28] Thus, Sakurazawa brought to the foreground this potassium-sodium interaction and furthermore boldly designated it as the manifestation of the yin-yang pair, the principle behind all phenomena of life.[29] In other words, while Ishizuka merely hinted at the antagonistic operation of potassium-sodium in association with the yin-yang principle, Sakurazawa wittingly developed this feature and incorporated this duality into his own brand of the *shokuyō* doctrine with a stronger metaphysical and "Oriental" hue.

Meanwhile, in a broader context of the conceptual and clinical concern in the field of public medicine and hygiene, Sakurazawa's oppositional stance against

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[28] Although Sakurazawa enthusiastically appreciated Ishizuka's "finding" of the yin-yang principle through the metabolic functions of minerals, he also admitted that he was never able to find out how Izukazu had come to discover potassium and sodium as the representatives of yin and yang respectively. Instead, Sakurazaw merely postulated that Ishizuka, like many other intellectuals of his generation such as Tanakadate or Nagaoka Hantarō (長岡半太郎, 1865-1905), must have developed some intuitive sensibility toward the yin-yang principle due to their early exposure to the Chinese Classic texts. Sakurazawa, *Eki*, 98-99.

[29] In *Shokuyōgaku genron volume 3* (Tokyō: Shokuyōkai, 1928), Sakurazawa used the terms potassium and sodium as if there were representatives of yin and yang. In his later writings, he replaced the yin-yang pair as a metaphysical concept.

modern/Western medicine was far from unique. From the late 1920s and particularly throughout the 1930s, a call for a fresh look at the strengths of Kampo medicine was gaining more advocates. During the Meiji period, Kampo medicine had been officially marginalized through the new medical system promulgated in 1874 and because of this, its institutional foundations and human resources seemed to have faded away, especially after the final parliamentary petition for a revision to medical license regulations in 1883. Although Kampo practitioners continued to operate in actual bedside care to varying degrees in different regions, modern biomedicine and pharmaceutics based on laboratory science undeniably came to take a central role in both scholarly and clinical medical scenes. By the 1930s, however, there was a growing concern and discontent with this direction of research and practice, even among licensed medical professionals themselves. The issues they faced ranged from proliferation of unorthodox therapies, excessive consumption of drugs from various sources, disproportionate accessibility of health care, to the efficacy of regular medical treatment. The resultant landscape can be described as "medical pluralism" in which different and at times conflicting medical systems coexisted.[30] The Kampo revival movement emerged against this historical backdrop, in which the call for its reexamination was not only initiated by acupuncturists but also by physicians of younger generation. In 1934, three factions of Kampo medicine formed an alliance and established the Association of Kampo Medicine (Nihon Kampō Igakkai). A mere two years after this association's establishment, its members began offering an open course "Takushoku University Kampō Medicine Course," which attracted more than 700 audiences and led to the establishment of the Association of East-Asian Medicine (Tōa Igaku Kyōkai) in November 1938. The chief characteristic of this mid-1930s

[30] Suzuki Akihito, "Chiryō no shakaishit teki kōsatsu," In *Bunbetsusareru seimi: 20-seiki shakai no iryō senryaku*, ed. Kawagoe Osamu et. al. (Tokyo: Hōseidaigaku shuppankyoku, 2008), 139-140.

Kampo revival movement laid in its orientation toward constructing a kind of "Japanese Kampo medicine," by clearly demarcating its doctrines either from Western medicine and pre-Showa Kampo medicine, as well as from Chinese and Korean traditional medicine.[31]

Against this backdrop of the search for new identity of traditional Japanese medicine, Sakurazawa stood side by side with the revivalists and subscribed to the antithetical characterization of Oriental versus Occidental medicine: he assigned descriptors like "synthetic," "root treatment," and "drugs from nature" to the former, and "mechanical," "symptomatic treatment," and "drugs using extraction procedure" to the latter. This bipolar typification was commonly found in the writings of the leading Kampo revivalists and at times even outside of the group. However, there were also disagreements among the revivalists particularly regarding Kampo's relationship with modern biomedicine. For example, Wada Keijūrō (和田啓十郎, 1872～1916) and Yumoto Kyūshin (湯本求真, 1876–1941) regarded modern physiology and anatomy as a new foundation of Kampo medicine. Nakayama Tadanao (中山忠直, 1895-1957), on the other hand, pointed out the self-contradictory nature of such a perspective, and contended that Kampo had its own theoretical fundamentals such as the pairs of yin-yang, inner-outer, and depletion-repletion.[32] It is clear that Sakurazawa's position stood close to Nakayama not only in emphasizing the yin-yang principle but also in advancing medico-cultural discourse as a non-medical professional. As a prolific essayist and poet, Nakayama published a number of articles and books on everyday culture, Japanese art, and Kampo medicine. As some of the leading 1930s Kampo revivalists recalled afterward, Nakayama's book *A New*

[31] Shin Chang Geon, "Nihon Kampō igaku ni okeru jigazō no keisei to tenkan: "Shōwa" Kampō to kagaku no kankei," in *Shōwa Zenki No Kagaku Shisōshi*, ed. Kanamori Osamu (Tōkyō: Keisō Shobō, 2011), 314.
[32] Shin Chang Geon, "Nihon Kampō igaku ni okeru jigazō no keisei to tankan," 318-322.

Perspective on Kampo Medicine (Kanpō Igaku no Shinkenkyū, 1927) was one of the most influential texts among medical professionals who were interested in traditional medicine and especially those involved in the Kampo revival movement.[33] Interestingly, Sakurazawa made acquaintance with Nakayama and even seemed to have gained financial and intellectual support from him in the early 1930s.[34] Perhaps it is because of this connection that Sakurazawa also contributed several articles to the Association of Kampo Medicine's journal, *Kanpō to Kanyaku*, where he discussed the theoretical foundations of Kampo, the distinct features of Eastern and Western medicine, as well as clarifying generic medical concepts such as curative, preventive, and natural medicine. Thus, Sakurazawa, in his attempt to align himself with this Kampo revival movement, refashioned the main tenets of the *shokuyō* movement to completely echo those of Kampo revivalists such as Nakayama.

It should be noted, however, that even though Sakurazawa shared with the revivalists' conceptual underpinnings of Kampo medicine, his (and the *shokuyō* group's) peculiar approach to medicinal effects of food was significantly different from what was called Kampo medicine of the time. Sakurazawa maintained a materialistic understanding of food properties simply based on the potassium-sodium, or yin-yang dimension. Therefore, even though he took into account other qualities such as taste, color, and shape, these elements were examined invariably to determine the relative propensity toward yin-yang properties. This methodology was distinctively different from the common Kampo herbology at the time, in which a more intricate system was employed to determine the quality and property of

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[33] Nakuyama Tadanao, *Kanpō Igaku no Shinkenkyū* (Tokyo: Hōbunkan, 1927).
[34] Sakurazawa wrote in the preface of his translation of René Allendy's book *Orientations des idées médicales* that it was Nakayama who suggested translating this book as well as provided personal support involved in translation and publication. Sakurazawa Yukikazu, translator's note to *Seiyō igaku no botsuraku*, by Rune Arandhii, trans. Sakurazawa Yukikazu (Tokyo: Senshinsha, 1931), 13.

substances in relation to the functions of human organ systems. For instance, Sakurazawa categorized ginger root as a yin food, while in Kampo *materia medica*, it has been generally considered to have warming effect, and its pungent and spicy tastes corresponds to *Metal* (out of five phases), which acts on lung and large intestines.[35] Despite the differences in both theory and treatment, however, Sakurazawa's *shokuyō* program shared with Kampo revivalists of the time its orientation toward pursuing a new medical system by way of retrieving what was perceived to be "Oriental" or "traditional" in order to tackle problems in medical efficacy as well as philosophy allegedly brought about by the "inappropriate" implementation of "Western" medicine since the Meiji era.

Translating *Eki*

Sakurazawa himself was conscious that his ideas were distinct from what was called Kampo medicine of the time. Insomuch as he embraced Ishizuka's *shokuyō* program through his embodied experience of curing diseases, his major concern was anchored in the principles behind food therapies. At the same time, however, Sakurazawa sought to expand the yin-yang theory, which was only alluded by Ishizuka, into an overarching theme that would apply to the realms beyond nutrition and medicine. At the heart of such an endeavor was his book, *Eki: banyū konpon musō genri* [Changes: the universal principle, *Eki* hereafter] published in Tokyo in 1936. In the preface, Sakurazwa revealed that the deeper he delved into Ishizuka's chemical physiology, the clearer he realized the fact that this antagonistic mechanism behind

[35] For a brief account of the qualities and properties of Chinese herbs, see Harriet Beinfield and Efrem Korngold, *Between Heaven and Earth: A Guide to Chinese Medicine* (New York: Ballantine Books, 1991), 269-274. A food historian Hagiwara Hiromichi commented that Sakurazawa's method was strikingly "simplistic and abstract," compared to those of Kampo or Chinese dietary treatment. Hagiwara Hiromichi, *Eiyō to shokuyō no keifu* (Tōkyō: Sanrōdo, 1985), 286-292.

sodium and potassium offered the key to understanding the mystery of life. Due to this essential nature of the two chemical elements, he began feeling that it was inappropriate to use their names to represent the broader workings of natural phenomenon.[36]

To this end, Sakurazawa claimed that one should go back to mythical Chinese emperor Fuxi's eight basic trigrams (*bagua*), or even the most basic binary system of yin-yang in order to appreciate this profound yet salient principle of yin-yang. He bluntly rejected more widely used 64 hexagrams from *Yijing* [Book of Changes], the complexity of which, he regarded, only served to mystify its truths and thus hinder proper comprehension of the otherwise fundamental yin-yang principle. According to Sakurazawa, the starting point of the yin-yang theory should be Fuxi's close observations of natural phenomena. Fuxi put forth a principle that everything entails or contains the opposite force. For instance, day comes with night; summer with winter; man and woman; birth and death; movement and stillness, etc. Fuxi intuitively contemplated that it is due to the operation of antagonistic forms of energy that ceaselessly emerge, move, compete, rise and decline, and transform into each other, and named such invisible antagonistic forces yin and yang.[37] What Sakurazawa called "the universal principle" (*musō genri*, or *Le principe unique* in French) was simply the proposition that the universe is composed of yin and yang, the fundamental forces behind ceaseless movements and changes in the universe. From this cardinal principle, he drew twelve rather abstract derivative principles that explicate the workings of yin and yang. A rough summary of these derivative principles will give the sense of the way in which he explicated the duality: yang is centripetal and compressive, while yin is centrifugal and expansive; yin attracts yang, and yang attracts yin; all existence is an

[36] Sakurazawa, *Eki*, 26.
[37] Ibid, 44 and 57.

infinity of differentials with varying degrees of yin and yang; there is no absolute yin or yang; yin brings forth yang when it reaches its climax, and vice versa.[38]

As the diagram of yin-yang categorization illustrates (Figure 2), Sakurazawa's version of yin-yang principle seems like a simplified binary system in which all the qualities and forces are diagnosed through the lens of yin-yang and placed on one point in the one-dimensional yin-yang spectrum. However, it is this simplicity and the binary's ability to achieve an all-inclusive dimension that Sakurazawa highly appreciated. He scathingly criticized the then widespread tendency among intellectuals to disregard or even scorn the yin-yang principle as superstition or divination. The yin-yang principle, said Sakurazawa, had been at the center of epistemology, ethics, political philosophy, and rituals and customs of daily life in the Orient; its flexibility, versatility, and wide applicability comes from the fact that its main concern is to explain the incessant changes and movements in everyday life. He showed a strong belief in the validity of the yin-yang theory as a synthetic (*sōgōteki*) principle that can be applied not only to natural phenomena but also to the realms of human behavior such as politics and ethics.[39] The arc of the book *Eki* as such illustrated this conviction: his narrative starts from explanations of *eki* as the universal principle and then goes on to show its applications in the fields of physics, spectroscopy, chemistry, life sciences, medicine, and lastly in philosophy and ethics. He unhesitatingly contrasted the synthetic and holistic features of *eki* to the increasingly specialized and compartmentalized ways of knowledge production in Western science. Taking a rather defensive attitude against the indictments against Oriental traditions for their lack of specialized disciplines, Sakurazawa maintained that such criticism was legitimate only when one accepts blindly the narrowly defined disciplinary perspectives from the

[38] Ibid, 50-51.
[39] Ibid, 23-24.

West. In the East, he argued, there had existed comprehensive and integrative intellectual approaches such as *eki* in the past, yet ever since the Chinese character *gaku* (学) was erroneously adopted to translate different Western disciplinary names such as *tetsugaku* (philosophy) and *kagaku* (chemistry), such overarching perspectives could no longer be housed under these disciplinary boundaries.[40]

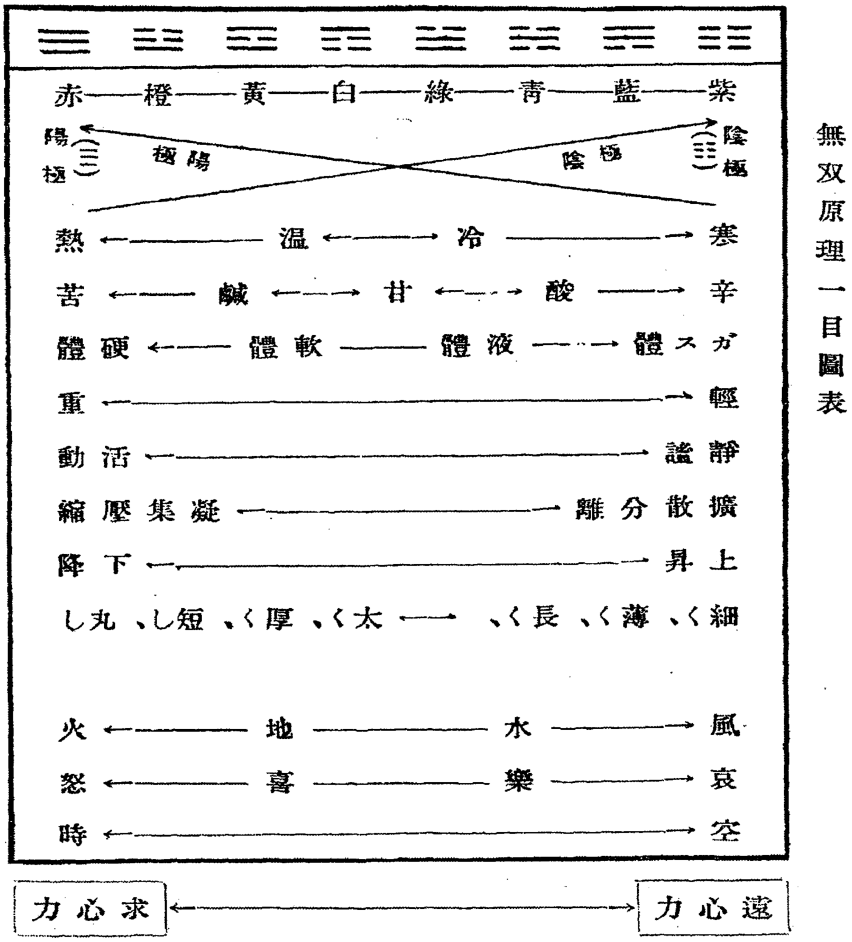

Figure 2. "Musō Genri At a Glance Diagram" from *Eki* by Sakurazawa Yukikazu (Tokyo: Shokuyōkai, 1936), 66.

[40] Ibid, 45-46.

It is notable that Sakurazawa himself considered his work to be a "translation" of the universal principle of yin-yang into modern scientific language. Furthermore, he was convinced that his unprecedented endeavor to "scientifically translate" the principle of *eki* was to offer a new synthetic perspective to Western science, which he diagnosed to be losing intellectual authority particularly after World War One.[41] In this sense, the target audience Sakurazawa presumed was those who were informed in modern scientific language and its concepts yet unfamiliar with Oriental science and philosophy. Assuming the potential audience in this manner shows his deep eagerness to seek recognition from "the West," and perhaps he sensed that there were also chances to be appealing to European audiences by repackaging the *shokuyō* tenets with the embellishment of *eki* deeply rooted in Asian traditions. Nowhere was this better demonstrated than in his adventurous travel to and stay in Paris between 1929 and 1935.

In the spring of 1929 when Sakurazawa was actively participating in the Shokuyō Association as the editor of its journal, he made a sudden and eccentric trip to Paris by the Trans-Siberian railway. It is not clear whether there was any other external reason for this travel, but his self-proclaimed goal was to publish books on *eki* in order to propagate the *shokuyō* program to the world.[42] Given that Sakurazawa had some overseas experience in Europe in his early career and was also well-versed with the French language, it is not surprising that he chose to go to France for such an endeavor. That being said, it seemed like a rather reckless and adventurous trip, since he had no financial support or institutional affiliation in Paris. Despite difficulties in the first two years, however, Sakurazawa managed to make acquaintance with several notable figures such as André Malraux (1901-1976) and Romain Rolland (1866-1944),

[41] Ibid, 15 and 24.
[42] Ibid, 16.

and through these connections, finally published the prototype of *Eki* in French, *Le Principe Unique de la Science et de la Philosophie d'Extrême-Orient* (*Le Principe Unique* hereafter) with a renowned publisher J. Vrin in 1931.[43] In the same year, he published another book, *Le Livre de Fleurs* (The Book of Flowers) and in 1934 co-translated Nakayama Tadanao's book into French, *Acupuncture et Medecine Chinoise Verifiees Au Japon* (Acupuncture and Chinese Medicine Verified in Japan), with George Soulie de Morant (1878-1955), a former French consul in China who is currently known to be the first person to introduce and practice acupuncture in France.[44] These books and translations seem to have been well received, and thanks to this success he was able to make the acquaintances of some celebrated literary figures and experts in non-European cultures and medicine.[45]

Sakurazawa later somewhat hyperbolically recalled this venture in Paris as if it had been an epic journey, and he fancied himself as an evangelical of Oriental philosophy and science to the West. He likened himself to Swami Vivekananda (1863-1902), a Hindu spiritual leader and reformer who spoke for Hinduism at the World's Parliament of Religions in Chicago in 1893. In the same way which Vivekananda stimulated Western intellectuals with his speech on Hindu spiritualism, Sakurazawa claimed he found a "blind spot" in Western nutrition and medicine, thereby had gained a foothold in the Western world.[46] It is difficult to assess how successful his campaign in Paris was by merely relying on his own self-aggrandizing statement. However, Sakurazawa certainly did gain some sympathizers and followers as well as acquired

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[43] *Le Principe Unique de la Science et de la Philosophie d'Extrême-Orient* [Unique Principle of Philosophy and Science of the Far East] (Paris: J. Vrin, 1931).
[44] Georges Ohsawa, *Le Livre Des Fleurs* (Paris: Plon, 1931); Nakayama Tadanao, *Acupuncture et Medecine Chinoise Verifiees Au Japon*, trans. T. Sakurazawa & G. Soulié de Morant (Paris: Hippocrate, 1934).
[45] Ronald E. Kotzsch, *Macrobiotics: Yesterday and Today* (Tokyo: Japan Publications, Inc, 1985), 58-9.
[46] Sakurazawa Yukikazu, *Hakkō ichiu no shokuseikatsu genri: atarashii eiyōgaku* (Ōtsu: Musō genri kōkyūjo, 1942), 14-15.

the support of important avenues such as the publisher J. Vrin with which he continued to publish his books later in the postwar period. Of course, this reasonable achievement cannot be explained without considering the climate of French medical circles between the late 1920s and mid-1930s.

The transformation of therapeutics and the rise of laboratory-based medical research was by no means a story exclusive to Japan or other non-Western societies. It was not until the late nineteenth century that a new therapeutic paradigm started to erode traditional clinical scenes in the Euro-American context as well. Traditional therapeutics was based on the perception on the body as a system of interactions with its environment whereby diseases were regarded as the outcome of cumulative imbalance between intake and outgo. Therapeutic emphasis, therefore, was placed on the importance of maintaining an equilibrium through proper diet, exercise, excretion, and other elements of lifestyle.[47] Although the emergence of the germ theory did not at once overturn such conventional therapeutics by the end of the nineteenth century, the first few decades of the twentieth century saw an increasing tendency to emphasize disease entities with the etiological victory of bacteriology. The concept of a bodily equilibrium and the body's healing power on its own seemed to give way to a variety of pharmaceutical innovations and laboratory-generated therapeutic techniques. It was during the interwar period that many physicians in Germany, France and the US advanced nostalgia for their medical traditions on one hand, alongside the widespread popularity for alternative treatments such as homeopathy and naturopathy on the other.[48] Particularly in the case of France, as George Weisz has pointed out, the terms such as "*synthèse*, *humanisme médicale*, and *néo-hippocratisme*" became catchwords

[47] Charles E. Rosenberg, "The therapeutic revolution: Medicine, meaning and social change in nineteenth-century America," *Perspectives in Biology and Medicine* 20(4), 487-9.

[48] Christopher Lawrence and George Weisz, "Medical Holism: the context," in *Greater Than Parts: Holism in Biomedicine, 1920-1950*, ed. Christopher Lawrence et al. (New York: Oxford University Press, 1998), 5.

of the interwar period. By the 1920s there were various forms of holistic medical currents that sought to challenge mainstream academic medicine: vitalism, naturopathy, homeopathy, and Christian medical humanism.[49]

Against this backdrop, the homeopath-psychoanalyst René Allendy and his book *Orientations des idées médicales* [Orientations of Medical Ideas][50] occupied center stage in an effort to bring together these fragmented currents into the more coherent neo-hippocratic movement in the early 1930s. His contribution, according to Weisz, was the offering of a conceptual framework through which one can divide all medical approaches into opposing two poles: analytical versus synthetic. The former was represented by the view that illness is the product of an external agent which causes should be "analyzed" and directly "combated" by physicians; the latter was characterized by the approach that illness is an cumulative processes to adapt to difficult conditions in which physicians' role was to encourage and facilitate this adaptation. Allendy associated the "synthetic" approach with medicines of China and India, Hippocrates, hermeticists, vitalists, and homeopathy, at the same time attributing the "analytic" perspective to Galen, Celsus, the Arabs, Boerhaave and the majority of modern practice by contemporary doctors. He argued that the "analytic" approach culminated with pasteurism's exclusive emphasis on germs, before facing predicaments due to its incompetency in treatment. In spite of that, he observed that the values of individual terrain and temperaments were regaining therapeutic authority over the past years.[51]

The manner in which Allendy characterized and contrasted the two medical approaches as well as the way he leaned toward the "synthetic" over the "analytic"

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[49] George Weisz, "A Moment of Synthesis: Medical Holism in France between the Wars," in *Greater Than Parts: Holism in Biomedicine, 1920-1950*, ed. Christopher Lawrence et al. (New York: Oxford University Press, 1998), 71-3.
[50] René Allendy, *Orientations des idées médicales* (Paris: Au Sans-Pareil, 1929).
[51] Ibid, 73-4. My summary of Allendy's argument is based on Weisz's discussion.

closely resemble Sakurazawa's dichotomous understanding of Oriental versus Occidental medicine and the latter's endorsement of the former. Also, given the way in which Allendy himself put Chinese and Indian medicines under the category of "synthetic" medicine, it is not difficult to imagine that he held a favorable attitude toward what Sakurazawa presented as Oriental medicine. Coincidentally, Sakurazawa arrived in Paris in the same year Allendy published *Orientations des idées médicales*. According to Sakurazawa, after publishing his book *Le Principe Unique de la Science et de la Philosophie d'Extrême-Orient* in 1931, he enjoyed Allendy's favor and this work was introduced by Allendy in the journal *L'Homéopathie française* [French Homeopathy].[52] In all likelihood, through this connection as well as Nakayama's support, Sakurazawa returned the favor with a translation of Allendy's *Orientations des idées médicales* into Japanese in 1931.

In his translator's note, Sakurazawa particularly emphasized that the most predominant medical current in Europe was the defeat of "analytic" medicine and the rise of "synthetic" medicine. Faithfully following Allendy's bifurcated conception on medical approaches, Sakurazawa revealed his understanding that what was called "Western medicine" in Japan was in fact the one developed in the eighteenth century and reached its peak in the late nineteenth century in Europe and the US. This brand of medicine, he illustrated, misguided the public by heavily relying on improvident techniques and the mechanistic treatment of the body. Over the course of the early twentieth century, however, this "analytic" version of medicine reached an impasse. He listed the recent phenomena he observed in France: an increase of incurable diseases, a decline in life expectancy, proliferation of unproven new pharmaceuticals, and underappreciated role of clinicians.[53] As far as solutions to this predicament are

[52] Sakurazawa, translator's note, 2.
[53] Ibid, 3-4.

concerned, however, Sakurazawa held different ideas from Allendy. Rather than presenting homeopathy, psychoanalysis and chiropractic as the applications of synthetic medical practice as Allendy did, he regarded Oriental medicine as the prime "synthetic" medicine.

Sakurazawa then unhesitatingly turned the target of criticism toward the contemporary Japanese situation. Bureaucrats and medical professionals alike in Japan seemed oblivious to this recent shift in the West, he deplored, and continued to follow analytic and narrowly applicable techniques, just as they had since the start of the Meiji period. Pointing out this tendency to follow Euro-American footstep without appropriate reflection was by no means limited to the fields of science and medicine, but also the case in social sciences and philosophy. As a clear indication of his detest for such tendencies, Sakurazawa scornfully labeled those involved in such intellectual Westernization as "colonial volunteers."[54] As is evident, he astutely sensed that the modernization process since the Restoration had been founded upon such self-colonizing efforts to implant European ideas, institutions and customs directly onto Japan. In addition, he was also aware of the asymmetry in the prevalent systems of knowledge production, where knowledge created in non-Western societies, such as Sino-Japanese medicine, did not hold an equal status as modern medicine created and practiced in Europe and North America. Furthermore, to Sakurazawa, the triumph of this nineteenth century "analytic" medicine in Japan was symptomatic of a broader socio-cultural climate of Japanese society moving toward more mechanical, rationalist, and materialistic directions. At the end of the translator's note, he conclusively announced that the distinction of the East and West in this sense was meaningless, as "the East is becoming more like the West."[55]

[54] Ibid, 9.
[55] Ibid, 12.

What is ironical with Sakurazawa's attempt to retrieve the epistemological and practical supremacy of what he called "Oriental medicine" vis-à-vis "Western medicine" was the fact that he put forth his claim by way of relying on the authority of European physicians like Allendy. In this sense, he effectively appropriated the very unequal intellectual structure he intended to criticize. As a self-taught person who never had institutional affiliations in Japan, Sakurazawa may have known that gaining support from French intellectuals would provide his thoughts with solid legitimacy he would not otherwise have exercised. Indeed, he straightforwardly complained in the preface of his Japanese version of *Le Principe Unique* that it was hard to gain support and find publishers in Japan to propagate his theory on *eki*.[56] Another way to explain Sakurazawa's adventure in Paris is his enthusiasm for internationalism. Constantly, he revealed his wish to free himself from the notion like "Japanese" in a narrow sense, and desired to be cosmopolitan enough to "embrace the world as his own motherland and perceive all nations as his compatriots."[57] Just as he sought to express the beauty of Japanese lyrics using universally recognizable Roman script, Sakurazawa believed a scientifically interpreted yin-yang theory would function as a universally applicable principle to understand riddles of life.

It is worth noting that his aspirations for internationalism and an attempt to gain interested audience in Europe were actualized not by emphasizing the universality of the yin-yang theory, but by further reinforcing the East-West dichotomy as well as essentializing cultural traits of Japan. Another important reference Sakurazawa relied upon for this purpose was the French philosopher Lucien Lévy-Bruhl (1857-1939)'s influential works on "primitive mentality."[58] Lévy-Bruhl

[56] Sakurazawa, *Eki*, 20-21.
[57] Ibid, 21.
[58] Lévy-Bruhl published six volumes on this subject between 1910 and 1938: *Les fonctions mentales dans les sociétés inférieures* (1910) [How Natives Think]; *La mentalité primitive* (1922) [Primitive Mentality]; L'âme primitive (1927) [The Primitive Soul]; *Le surnaturel et la*

characterized primitive mentality as pervaded with the law of "participation" in which the association between persons and things forms in the manner modern logical thought cannot imagine. He explained the notion of society for the primitive mind: "Society consists not only of the living but also of the dead, who continue to 'live' somewhere in the neighborhood and take an active part in social life before they die a second time…the dead reincarnate in the living and, in accordance with the principle of mystical participation, society is as much merged in the individual as the individual is merged in society."[59] While admitting that Lévy-Bruhl's discussion did not mention anything on the Orient or the Japanese, Sakurazawa read the analysis of "primitive mentality" as something that perfectly fit with Japanese culture. Impressed by Lévy-Bruhl's formulation on "primitive mentality," Sakurazawa sailed back to Japan in early 1931 with his 500-page Japanese translation draft of Lévy-Bruhl's work. However, he could not publish his translation in the end since he had trouble finding a publisher; instead he published the translation of Allendy's book with the support of Nakayama. While staying in Japan for a few months, Sakurazawa delivered lectures on Western perception of the Japanese in which he spent a great portion introducing Lévy-Bruhl's ideas on "primitive mentality."[60]

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nature dans la mentalité primitive (1931) [Primitives and the Supernatural]; *La mythologie primitive* (1937) [The Primitive Mythology]; and *L'expérience mystique et les symboles chez les primitifs* (1938) [Mystical experience and symbols in primitives]. The first Japanese translation of Lévy-Bruhl's work was *Mikai Shakai no Shii* (*Les fonctions mentales dans les sociétés inférieures*) (Tokyo: Oyama Shoten, 1935) translated by Yamada Yoshihiko.

[59] Cited in Stanley Jeyaraja Tambiah, *Magic, Science, Religion, and the Scope of Rationality* (Cambridge [England]: Cambridge University Press, 1990, 86.

[60] Watanabe Motomu compiled Sakurazawa's lectures and published *Hakushoku jinshu wo teki toshite* (Tokyo: Bunshoin, 1932). This booklet was reprinted in 1941 with three short appendixes added. In his new preface for the 1941 print, Sakurazawa said the 1932 version was sold more than 30,000 copies in the army. Sakurazawa Yukikazu, *Nihon wo horobosu mono wa tare da: hakushoku jinshu wo teki ni shite tatakawanebanaranu riyū* (Tokyo: Seishi shoin, 1941), 1.

It seems that Sakurazawa was particularly impressed by Lévy-Bruhl's formulation of "the invisible world" in native minds, where the dead are perceived not only to exist in a community over a long period of time but also have some interactions with the living. He assuredly associated this with the rituals and customs of ancestor worship in Japan and, interestingly enough, applied "primitive mentality" to the Japanese.[61] On one hand, Sakurazawa critically pointed out the European scholars' intention to investigate the humanity of "the past" by presuming primitive peoples to be "inferior races" in opposition to "superior" European observers. On the other hand, however, rather than arguing that the Japanese/the Oriental nations should not be categorized along with "primitives," he contended that Europeans are incapable of perceiving this "invisible world" and thus more primitive than primitives in terms of spiritual sensitivity.[62] To a certain degree, he appears to have rejected the racial hierarchy constructed by European anthropological endeavors colored with strong imperialistic hues: he inverted the position of the superior and inferior by giving primacy to "pre-logical and mystical mentality" over "logical and rational minds." This strategy, however, also entailed further reinforcement of the binary typology of the East versus West, and more importantly, ended up producing self-Orientalizing rhetoric by essentializing Japanese culture into something imbued with spiritualism and mysticism.

Years later at the height of the Pacific War in 1943, when the problem of "primitives" became conspicuous in Japan's newly occupied Southeast Asia, Sakurazawa's unusual interpretation of "primitive mentality" was brought back again. His timely published book on the theme, *Primitives' Spirit and Japanese Spirit* (Mikaijin no seishin to nihon seishin), was a sort of critical proposition for the

[61] Sakurazawa, *Hakushoku jinshu wo teki toshite*, 102-4.
[62] Ibid, 107.

ongoing ideological campaign in the occupied regions. Boldly claiming that Southeast Asian natives' seemingly uncanny mentality was in close accord with "Japanese spirit," Sakurazawa once again stressed that primitive mentality was the archetype of Japanese mind. However, while his 1932 discussion placed a focus on a contrast between East and West, and Japan was included in the former, his 1943 exhortation stressed a role the Japanese were expected to play in the region. Judging harshly on Euro-American imperialisms and their "failures" in Southeast Asia, Sakurazawa alerted Japanese invaders to the ideological pitfall that Western colonizers demonstrated with their white supremacy. Instead, he urged his fellow Japanese to properly appraise the strengths of "primitive mentality" that incorporates the "courage, candidness, health, physical strength, wisdom, delicate sensitivity" and thus demonstrates "true humanity"(*ningenrashisa*) more than the civilized. In other words, Sakurazawa encouraged the readers to be "open-minded and amicable" invaders by better understanding the locals in Southeast Asia.[63] Not surprisingly, Ōkawa Shūmei (大川周明 1886-1957), an Islamic scholar cum Pan-Asianist writer, spoke highly of Sakurazawa as perfectly and critically "masticating" Lévy-Bruhl's work, and recommended those who were in service of "constructing the Greater East Asia Sphere" to read this book to avoid repeating the failed Western colonial policies in the region.[64]

In this way, at the heart of Sakurazawa's reformulation of the *shokuyō* tenet was the introduction of *eki*, or what he named *musō genri* (the universal principle), which was supposedly at the opposite pole of its Western counterpart. Instituting the notion of *eki* was mostly vigorously carried out through his activities as a middleman or translator between France and Japan. However, the problem inherent in his

[63] Sakurazawa Yukikazu, *Mikaijin no seishin to nihon seishin* (Tokyo: Musō Genri Kenkyūjo, 1943), "Author's Forword I."
[64] Ōkawa Shūmei, "Preface," Ibid.

discussion was that the more he emphasized universality of *eki* as well as the feature peculiar to the East as opposed to the West, the more vague his propounding of Japanese culturalism became, a culturalism which had informed and invigorated his ideas. In other words, the trajectory of Sakurazawa's explication of the universality of *eki* raised the question of where Japaneseness or Japanese culture can be located within this very configuration, particularly vis-à-vis what he thought as Oriental culture. As though mirroring his attempt to use Japanese-style Romanization to internationalize the Japanese language, Sakurazawa's solution to the above question was to push his Japanism to the extreme to the point where Japaneseness can be made into a universal principle. Although Sakurazawa's early writings such as *The Physiology of Japanese Spirits* (1927) already contained a similar position on this matter, from 1935 onward, he further stressed the universality of Shinto in his writings he produced after returning to Japan from France.[65]

Several months after the publication of *Eki* in Japanese in 1936, Sakurazawa published *Shinto as Natural Medicine* (*Shizen igaku toshite no shintō*). Considering Sakurazawa's consistent claim on the monistic and holistic integration of science and spiritualism, it comes as no surprise that he associated his claims on *eki* with *musubi* (産霊), drawing on *The Chronicles of Japan* (Nihon Shoki, 720AD). Explicating the meaning of *musubi* as holy forces that "produce" and "create," he understood that the two deities of creation, *takami-musubi* and *kami-musubi*, are manifestations of the yin-yang principle deeply embedded in ancient Japanese minds. More importantly, Sakurazawa interpreted Japanese reverence for *musubi* as a valuable tradition in which

[65] In the last two chapters of *The Physiology of Japanese Spirits*, Sakurazawa differentiated physiology based on the Japanese spirit from Western physiology in a dogmatic tone: the core of the Japanese spirit is an attitude to discover vitality of life in all natural phenomena, while scientific spirit is based on mechanistic and rationalist understanding of nature; the former takes into account of the imprint of time and space, while the latter removes such traits through abstract generalization. Nishitani and Sakurazawa, *The Physiology of Japanese Spirits*, 83-86.

people believed all living beings arise from and abide by the same law of life.[66] The meaning of this "creation," he continued, should not be understood as modern engineering or manufacturing but as the very root of life itself. Again, relying on his schematic dichotomy between East and West, Sakurazawa defined Western medicine as a "human medicine" that places humans at the center without consideration of other living beings, while Shinto medicine offers a perspective that sees humans as part of great nature and therefore conceives them as living in nature (*kimyō,* or *shizen wo ikiru*). He called the latter "medicine of Way" (*idō*) and "medicine of nature (*shizen igaku*)."[67] Resonating with the conservative scholar like Kakei Katsuhiko (筧克彦, 1872−1961), who advocated for a theological interpretation of the Meiji Constitution, Sakurazawa unwaveringly extended the notion of State Shinto ideology as a "Way as it is with the gods" (*kannagara no michi*), to the Way of natural medicine.[68]

One of the most important features of Sakurazawa's discussion of Shinto in relation to shokuyō ideas seemed to lie in his emphasis on performativity. For him, "*kannagara no michi*" was a wedge (*kusabi*) or a knot (*musubi*) between heaven (soul), earth (harvest), and humans, whereby ordinary people can participate in this Way in their daily lives. In his own words, "the Way as it is with the gods is not something you can merely give a sermon on; it is the great Way of action; it is the Way of practice without words."[69] For him then, at the practical level, the acting of the Way was to follow the principle of *Shindo Fuji*, that is to say, partaking of locally and seasonally produced foods in the archipelago. The pursuit of the Way of nature appeared to be so simple and easy, so much so that, he warned, it was hard to recognize it as "natural medicine" and by extension, the profound significance it has in

[66] Sakkurazawa Yukikazu, *Shizen igaku toshite no shintō* (Tokyo: Shokuyōkai, 1936), 51-55 and 152.
[67] Ibid, 142.
[68] Ibid, 140-141.
[69] Ibid, 186-7.

maintaining health and happiness. He equated this natural medicine to the Way of *shokuyō*, and at this point, situated natural medicine (or *kannagara no michi*) vis-à-vis Kampo medicine.

Just as he characterized Kampo medicine as "natural" in comparison to modern biomedicine, Sakurazawa labeled the *shokuyō* principle more fundamental, essential, and thus natural compared to Kampo medicine. While admitting the shared medical philosophy of *eki* in both, he further claimed that Japanese *shokuyō* was a kind of archetype of Oriental medicine. Proposing a broader definition of food not only as substances we ingest but also as an extensive natural environment that informs our health directly, Sakurazawa declared that food was the quintessential source of the phenomenon of life. He stipulated the ultimate goal of the Way of *shokuyō* was not merely curing diseases through diet but rather preserving optimal health and achieving happiness as a living being, which is highly reminiscent of the old notion of *yōjō*, as the art of preserving health and prolonging life.[70] Therefore, he asserted that, curative medicine must advance toward preventive medicine, and preventive medicine toward natural medicine of *shokuyō*, which was ideally to abolish the practice of medicine as such.[71] In his late 1930s writings, Sakurazawa replaced the term Japanese medicine with natural medicine to refer to the *shokuyō* principle in order to emphasize its universal applicability in the world in the future: "this new medicine….should prevail in the world as medicine for the mankind regardless of race, land, and environment. I would call this "natural medicine" or "holistic medicine"(*zentai igaku*) as opposed to "curative medicine," "symptomatic treatment," and "Western medicine." Adding places of origin such as "Oriental" or "Japanese" does not necessarily indicate the content of it as well as makes it sound somewhat oppositional and exclusive."[72]

[70] Sakurazawa Yukikazu, *Shizen igaku* (Tokyo: Shokuyōkai, 1938), 150-152 and 204.
[71] Ibid, 198-199 and 148.
[72] Ibid, 148.

Thus Sakurazawa consciously put efforts to proclaim the *shokuyō* theory as a globally applicable principle around the time when the Japanese Empire was gaining footholds in China. Rather than removing cultural uniqueness of Japanese tradition, conversely, he drew heavily on the notion of ecological sensitivity and reverence for nature allegedly rooted in traditional Shinto, thereby preparing the ground for the universal principle of *shokuyō* in a time of the expansion polities of the Japanese Empire. Sakurazawa's new emphasis on the *shokuyō* principle as the manifestation of the Japanese spirit seemed to have gained many sympathizers within The Shokuyō Association. The Journal *Shokuyō* spent substantial pages to explain the principle of *eki* based on Sakurazawa's writings, with other contributors discussing the cultural, economic, and medical significances behind the now re-formulated *shokuyō* principle. Omodaka Hisadaka (澤瀉久孝 1890-1968), a Kyoto University professor of Japanese literature, was one of the advocates of Sakurazawa's new rendering. Introducing how he and family members improved health by converting to the *shokuyō*–based diet, Omodaka highlighted the importance of practicing the Japanese spirit in everyday life through daily eating habits. He particularly eulogized Sakurazawa's writings as something beneficial to wider populations, and distinguished his ideas from "narrowly-minded nationalism."[73]

In early 1940, when wartime New Order movements were blooming in the midst of the stalemate of the Sino-Japanese War, Sakurazawa sought to place more focus on *shokuyō* public health campaign rather than on individual consultation and treatment. Furthermore, although he continued to publish practical health manual books, among which *The New Shokuyō Theraphy* was most successful, his scheme of *eki* increasingly concerned the realms beyond medicine and health and extended to

[73] Omodaka Hisadaka, "Seikatsu gurumi no nihonseishin"[Japanese spirit in the whole life] *Shokuyō* 390 (1940.6), 38-9.

include the discussion of a new world order based on his *musō genri*. Subsequently, Sakurazawa resigned as president of the Shokuyō Association and set up a separate institute, the Center for the Universal Principle (Musō Genri Kenkyūjo) in Ōtsu near Lake Biwa in Shiga Prefecture in September 1940, and then a Tokyo office named "Musubi" in Kanda the following year. According to Matsumoto Ichirō, a biographer of Sakurazawa, he left the Association since he was too "capable" a man for some Shokuyō Association trustees to deal with. According to Matsumoto, the physician members, in particular, felt alienated with the ideas of *eki* while at the same time, there were also much discontent with his dictatorial leadership style.[74] However, the board of trustees recounted a different explanation: the conflicts stemmed from Sakurazawa's attempt to extend his presidency and thus dominate the Association by way of unjustly revising its constitution. Even though the board allowed Sakurazawa to maintain an advisory role after his resignation as president, Sakurazawa maneuvered to take back his control over the Association and to acquire ownership over its real estate. In September 1941, the trustees unanimously voted to expel Sakurazawa from the Association.[75]

In spite of these strikingly different accounts and conflicting explanations on Sakurazawa's expulsion, one thing that seems clear is the fact that this internal friction certainly involved, at least partially, irreconcilable perspectives on reformulated *shokuyō* doctrine by Sakurazawa. This can be gleaned from the changes brought about right after the purge of Sakurazawa. First and foremost, the Association endeavored to

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[74] Matsumoto Ichirō, *Shokuseikatsu no kakumeiji* (Tokyo: Chisan shuppan,1976), 69-70.
[75] "Shokuyōkai to Sakurazawa Yukikazu shi tono kankei ni tsuite," *Shokuyō* 35-special issue (1940), 25-35. This special issue was entirely on the expulsion of Sakurazawa that occurred in September 7, 1941 and related reports and testimonies. Unlike most of the sources written by disciples or sympathizers of Sakurazawa, this source demonstrates the opposing party's strikingly different views on the issue. The content of the indictment of Sakurazawa ranged from his private affairs with female members, lack of knowledge, scholarly dishonesty, to greed for power and money.

bring back Ishizuka Sagen's chemical balance theory at the center of the *shokuyō* activities. An attempt to remove Sakurazawa's interpretation of *shokuyō* was shown in the sudden disappearance of the discussion of *musō genri* and Sakurazawa's writings in its official journal. One trustee member, Maejima Ichiji stressed the need to adhere to Ishizuka and other earlier leaders teachings, while another regular member Sugaya Jūhei voiced concern about the legitimacy of Sakurazawa's critique of modern medicine in general.[76] Numata Isamu, one of the leading physician members, suggested a new direction of the *shokuyō* movement in an article titled "Scientize shokuyō" by drawing on then the minister of education and physiologist Hashida Kunihiko's famous phrase "science-doing minds"(*kagaku suru kokoro*).[77]

Even though the members did not completely reject the idea of Shinto and the Japanese spirit behind the *shokuyō* tradition, it seems fair to assume that a substantial faction of the Association favored a moderate interpretation of Ishizuka's *shokuyō* theory within the boundary of sanctioned realms of health, medicine and food. In other words, Sakurazawa's assertions on Oriental medicine and the yin-yang theory, and his somewhat radical criticism of modern science and medicine were not entirely accommodated by many members of the Association. This attitude can also be found in the trustees' reaction to the police investigation and warnings against Sakurazawa's clinical activities. Sakurazawa's prescription of dietary regime was accused as a violation of the Medical Law (Ijihō) in 1939 and 1941. Although the first case occurred in the Association's Mizuho Hospital, the members reacted to this with great dismay and contempt, and invariably condemned Sakurazawa for his unqualified intervention in clinical activity. Considering that various treatments by non-licensed practitioners were widely performed and popularized at the time, the Association

[76] Maejima Ichiji, "Kōgi shindofuji to daijōteki shokuyō," *Shokuyō* 35-10 (1941), 21-28; Sugaya Jūhei, "Ichikai'in no mita shokuyō to shokuyōkai," *Shokuyō* 35-10 (1941), 47-50.
[77] Numata Isamu, "Shokuyō wo kagakuseyo," *Shokuyō* 35-10 (1941), 4-10.

members seemed to support the authorities' policy to ban non-licensed medical activities even if these were dietary consultation and prescription they were deeply supportive of.

After terminating his involvement in the Shokuyō Association, Sakurazawa vigorously continued to spread his doctrine of *musō genri* not only for the purpose of public health, but also as a principle to cultivate a robust and spirited Japanese nation in the face of total war. Based in Kansai area now, Sakurazawa with his like-minded fellows offered summer camp programs for children (*kenkō gakuen*) and summer workshops for adults (*musō genri kaki daigaku*). In 1941, for example, *Kenkō gakuen* (The school of health) summer camps were offered in three different locations and attracted 240 children and their mother participants: "Lake Biwa School" in Ōtsu, Shiga Prefecture; "Setonai Sea School" in Kojima Bay, Okayama Prefecture; and "Lake Tōya School" in Hokkaido. Sakurazawa announced that the goal of *Kenkō gakuen* was to make sound bodies and minds of the young national citizens (*shōkokumin*) through teaching children how to appreciate food as source of life, and ultimately, as the incarnation of divinity (*kamisama*).[78] The cardinal principle of *shindo fuji* and the importance of natural environment of each camp site was also emphasized. The "Lake Tōya School," for instance, was advertised as follows: "We are planning to try a *shindo fuji* diet for the northern cold region, which is supposed to be the starting point of our Japanese nation's advancing to the north policy… Our aim here is to nurture the fledgling national leaders who would acclimatize themselves to a harsh and cold environment like Hokkaido, Siberia, Karafuto, and Kamchatka, even without eating rice and only relying on multi-grains, butter, and bread."[79]

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[78] Sakurazawa Yukikazu ed., *Kenkō no Gakkō* (Ōtsu: Musū Genri Kenkyujo, 1941), 7. The subtitle of the book reads: "Constructing a new world order through health; Preserving health through food."
[79] Ibid, 303.

In a sense, Sakurazawa's extraordinary attention to child education during the wartime period was indicative of his vision of the *shokuyō* movement as a means of spreading his *musō genri* as a new world view. Although he was by no means against Japan's imperial expansion into Asia and beyond during the war time period, the gist of his activities were more concerned with constructing ideological and cultural legitimacy rather than inciting direct and military aggression. As he stressed soft power and moral authority in occupied Southeast Asia, he envisioned that a long-term strategy of strengthening Japanese nation by nurturing the sound minds and bodies would be the ultimate and fundamental solution to win the war against the West. Oddly reminiscent of Ishihara Kanji's scheme of the "Final War" between Japan and the West, Sakurazawa believed that there would be an eventual power struggle (yet not necessarily military confrontation) between the East and West, that is to say, a conflict between the two antagonistic worldviews: the former, represented by Japan, embodied the world of spirituality and harmony with nature; and the latter, represented by Anglo-European imperialism, embodied materialism, mechanism, and exploitation of nature.[80]

Therefore, he acknowledged the minimal possibility of actually beating Western powers in the ongoing Pacific War, and this was due to their military power stemming from their superior material and technological power at the moment. In the same passage, he recognized that modern style warfare took the form of "total war" in which individual national subject's capability became a determining factor in waging wars.[81] Albeit somewhat romantic and idealistic, Sakurazawa probably conceived that it was time to nurture and strengthen Japan's leadership, worldview, and spirit. In light of this, nothing was more important and urgent than the project of child education for

[80] Sakurazawa, *Nihon wo horobosu mono wa tare da*, 117-123.
[81] Sakurazawa Yukikazu, *P.U. Chūgoku yonsennen shi* (Tokyo: Musō Genri Kenkyūjo, 1943), 100.

raising future leaders of the nation. Sakurazawa's project was thus a long-run one; if implemented successfully, his *shokuyō* education programs and summer camps were part of his aim to "re-Japanize" Japan in a way that restores to the nation its once-lost harmony with nature, a proper health, and happiness ever since its modern transformation in the Meiji period. Ironically enough, just as Ishihara Kanji was alienated in the military due to his oppositional stance toward the Sino-Japanese War, Sakurazawa's pessimistic prediction of the war also invited oppression from the authorities and he was sent to prison toward the end of the war in 1945. Also, in the same way as Ishihara's vision was remembered by conservatives as exemplary of thwarted dreams during the war, Sakurazawa's position as a radical internal critic enabled the postwar sympathizers to call him an "anti-war pacifist."

In this chapter, I have attempted to unpack the ways in which the *shokuyō* movement evolved into a popularized health campaign with the help of a system of ideas contrived by Sakurazawa's relatively widely and well received writings. No matter how controversial it might have been, Sakurazawa's rendering of the *shokuyō* regime offered a distinct interpretation of Ishizuka's original formulations, and thus extended the *shokuyō* tenets beyond a mere dietary regime or specific treatments. As I have highlighted, associating the *shokuyō* principles with the yin-yang theory (*eki*) was at the heart of this new endeavor. Through this association with *eki*, Sakurazawa's strategy was to bring the *shokuyō* theory closer to traditional Sino-Japanese medicine as well as the Shinto concepts, thereby instituting the notion of "nature" and the "natural" into *shokuyō*'s core identity. This ideological construction of "natural medicine" was invariably carried out along with his critique of modern biomedicine. The critique of modernity and Western science and medicine, thus, profoundly shaped and informed Sakurazawa's *shokuyō* theory intensively between 1929 and 1945.

Through reformulating Ishizuka's chemical diet in the language of *eki*, he emphasized the bio-ecological interrelatedness of body and nature through the medium of food. Such a view of food as "natural medicine," or preventive medicine through diet, was envisioned as universally applicable principle particularly at a time Japan was transforming itself into a rapidly expanding Empire after its invasion into Manchuria in 1931. As a bridge, this chapter thus provides the intellectual backdrop to the following two chapters where I will examine how this renewed principle was applied in actual campaigns during the same time period. Each chapter will focus on one specific food item: brown rice as the most valorized food, and then sugar as the most incriminated food.

CHAPTER FOUR

RICE FOR TOTAL WAR: THE DARKER, THE BETTER

"Let us stop eating *hakumai* (white rice); make *haiga mai* or *shichibu-zuki mai* as our staple food! For the sake of national spirit mobilization; for the sake of our health!"

In the spring of 1938, the Nagoya City White Rice Abolition Alliance put forth this straightforward phrase on their campaign posters and launched the "One special white rice-free week" program throughout the city.[1] Here the terms *hakumai* (白米), *haiga mai* (胚芽米), and *shichibu-zuki mai* (七分搗き米) indicate the types of rice with various degrees and methods of polishing: *hakumai* meaning white polished rice; *haiga mai*, partially polished rice with the germ left intact; and *shichibu-zuki mai*, partially polished rice that preserves at least thirty percent of its bran. Soon after, the nearby prefecture of Shiga also joined the movement and publicly urged people to abandon white rice. Both Shiga and Nagoya campaigns attempted to disseminate the idea that white rice is the least economical and most unhealthy staple food for the nation.

Although they were initiatives at the city/prefectural level, the two 1938 campaigns above were in fact precursors to sweeping changes in national policies regarding rice as a staple. Beginning with an introduction by the central government of The Rice Milling Regulation Law of 1939, there was a prohibition of the polishing of rice over seventy percent. Because of this, white polished rice, presumably the most favored staple item by the Japanese people at the time, was eventually banned, *shichibu-zuki* rice became the main staple. However, this policy did not last long, and *shichibu-zuki* rice, as a new standardized form of rice, was soon replaced by brown

[1] Shimizu Katsuyoshi, *Shōwa senzenki nihon kōshū eisei shi* (Tokyo: Fuji, 1991), 531.

rice on November 24, 1942. This redefinition of standardization of rice proceeded under a directive issued by the Imperial Rule Assistance Association (*Taisei Yokusankai, Yokusankai* hereafter). With the outbreak of the Pacific War as well as the resulting food and resource shortages that were unprecedented then, the *Yokusankai* declared brown rice as a new standardized national staple.

More often than not, historians have tended to interpret this pair of seemingly abrupt changes in rice standardization policy as an ad hoc, irrational and scientifically groundless measure, particularly in their treatments of the latter case of *genmai*. Shimizu Katsuyoshi commented that the shift to *genmai* was a mere reflection of politicians' idiosyncrasy with little understanding of nutritional sciences.[2] Similarly, Iwasaki Masaya described the wartime adoption of *genmai* as the bankruptcy of the Japanese rice ideology. Defining the Japanese rice ideology as the prewar conception that linked the practice of eating Japanese (white) rice to one's identity as a member of the Japanese community, he highlighted how such nationalistic claims increasingly became a hollow notion as the food shortage further aggravated and led to a severe lack of rice. Specifically, he interpreted the claims for *genmai* as an expression of occultism by drawing on the advocates' emphasis on bolstering Japanese cultural identity through eating the food from the age of gods (*kamiyo* or *jindai*).[3]

Indeed, just as rice itself has been often associated with the core of Japanese cultural identity since the Meiji period (and somewhat even up until today), *genmai,* which tends to carry more primordial connotations, has been generally associated with Japanese cultural nationalism originating from the prewar and wartime ideology. Some postwar *genmai* eating supporters were also aware of this and argued for severing *genmai* from its close cultural ties to the notion of a pristine national culture,

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[2] Ibid, 534.
[3] Iwasaki Masaya, "Kanashimi no beishoku kyōdotai," in *Shoku no kyōdotai*, ed. Fujiwara Tatsushi et al. (Kyoto: Nakanishiya, 2008), 52-53.

or more accurately, those movements imbued with right-wing cultural essentialist echoes. For instance, in the 1980s, the Dōshisha University students movement group fiercely criticized Ōta Ryu, one of the most well-known postwar *genmai* proponents, arguing that Ōta's totalitarian views and *genmai* eating should be separated.[4] Shimizu and Iwasaki, in this sense, seem to share this postwar conception on the cultural meaning of *genmai* eating practices and thus unhesitatingly likened the promotion of *genmai* eating to the irrational, spiritual and mystical sides of prewar cultural nationalism.

In the context wartime Japan, however, the claims on *genmai* and their socio-cultural implications went far beyond the narrow scope of irrational organicist ideology. In truth, not all *genmai* advocates committed themselves to the cause of Japaneseness in an exclusive sense of the ideology, nor were they disinterested in scientific discourse on nutrition and human physiology. Rather, the discourse surrounding *genmai* clearly demonstrates how scientific discourse itself has fluid boundaries between science and non-science, or authentic and non-authentic knowledge. More importantly, as I will show in this chapter, interpreting the *genmai* adoption as a mere manifestation of wartime "irrational aberration" hinders proper contextualization of the staple food reform initiatives toward the goal to rationalize national diet throughout the 1930s. As I will discuss below, even before the legalization of *shichibuzuki* or *genmai* rice, there was an intensive discussion among medical, agricultural, and nutritional specialists on the ideal type of staple food for the nation. The final solutions to this staple food issue, therefore, need to be understood as an endpoint of this endeavor with higher intensity under total war.

[4] Dōdai genmai seishoku kyotō kaigi, "Ōta Ryū Hihan = Genmaishoku hihan de attewa naranai," *Impakushon* 16 (1982): 125-127.

Another issue regarding the staple food reform is the historical question of whether the directives were a form of coercion or were they promoting spontaneity. In terms of its chronology, the newly formed *Yokusankai* (1940-1945) was the first to take up the task of spreading *genmai* eating as a national initiative. They were later succeeded by the Ministry of Health and Welfare, which eventually led the campaign. Given that government officials were generally disinterested in the *genmai* option due to its unpopularity among the general public, it would be fair to characterize the process and eventual administrative orders as being largely based on a top-down approach. Nevertheless, branding the *genmai* adoption merely as a top-down policy also makes invisible the existence of a series of spontaneous discussions and movements toward *genmai* standardization. As was shown in the Nagoya City White Rice Abolition Alliance case above, even before the introduction of 1939 measures, there were a number of anti-white rice and *genmai* eating campaigns.[5] In this sense, *Yokusankai*'s decision to promote *genmai* can also be interpreted as an effort to absorb and appropriate such spontaneous or at least non governmentally-initiated movements into their broader staple reform initiative nationwide. In other words, the problematic characterization of *genmai* policies as merely top-down raises a number of questions.

[5] Another striking instance of this bottom-up type initiative can be found in the white rice abolition movement led by Japan Federation of Women's Organizations (日本婦人団体連盟) from 1937 onward. The Federation was constituted by the major leaders of the 1920s woman suffrage movement such as Ichikawa Fusae, Yoshioka Yayoi, and Maruoka Hideo. Their active involvement in the rice issue exemplified the shift from political rights-centered approach to lifestyle and consumer-centered approach in feminist movement in the 1930s. This case is beyond the scope of this chapter, but it should be noted that the Federation's movement provides another revealing example of the dynamics of mobilized spontaneity during total war. See Ozaki(Iuchi) Tomoko, "Nicchū senjika no josei undō: Nihon fujin dantai renmei niyoru "hakumaishoku haishi undō," *Shakai Kagaku* [Doshisha University] 45(3) (2015): 105-131. Narita Ryūichi also provides a stimulating insight into this dynamics by closely reading Oku Muneo's emphasis on the gender-specific role of females and motherhood as an effective ground to call for full citizenship of women as national subjects through their participation in war efforts. See Narita Ryūichi, "Women in the Motherland: Oku Mumeo Through Wartime and Postwar" in *Total War and 'Modernization,'* ed. Yamanouchi Yasushi et. al. (Cornell University East Asia Program, 1999), 137-158.

More specifically, how can this enthusiasm for propagating *genmai* be explained, particularly across various expert groups, ranging from physicians, military personnel, agricultural specialists, and anthropologists to literary critics? In what ways were these largely shaped by the middle-class and learned folk's movements and how did they ultimately feed into *Yokusankai*'s policy of national movement? In an attempt to understand the presence of such spontaneous movements and its cultural-political significance, this chapter charts a brief history of rice consumption, and then discusses the staple food reform measures leading up to the wartime regulations of rice. This will provide the grounds for my discussion on several individuals who put forth the tenet of rice eating as a social reform based on their embodied healing experiences, a tenet which constituted the core of the fervent *genmai* advocates.

The Rice Boom and the Rice Problem

From the beginning of the twentieth century up until the 1960s, rice production within the Japanese archipelago did not meet the domestic demand. During this time period, the government imported rice from both the colonies and foreign countries. Especially after the Rice Riots of 1918, the amount of imported rice started rising steeply until it accounted for more than ten percent of the entire domestic consumption. Relying on more than one hundred tons of imported rice annually, rice consumption remained at approximately 130 kilogram per capita annually from the 1910s until the last phases of the Pacific War. This figure demonstrates that the prewar Japanese population ate more than twice as much rice per head as contemporary Japanese people do (59kg a head per year as of 2004).[6]

[6] Ōmameuda Minoru, *Okome to shoku no kindaishi* (Tōkyō: Yoshikawa Kōbunkan, 2007), 2-3.

Despite the growing domestic demand and widespread consumption of rice as the primary staple food, especially in predominantly urban areas, the government did not take decisive action to regulate supply and price uncertainties until the early 1920s. The impact of the Rice Riots, however, eventually forced the authorities to realize the importance of a stable supply and adequate price controls, and one of the long-term responses was to accelerate rice productivity in the colonies. The *Sanmai zōshoku keikaku* (Program to increase rice production) in colonial Korea, for example, was implemented from the 1920s onward and the resultant increases in rice production and commodification gradually came to buttress the imperial government's consistent policy of low rice price. According to economic historian Ōmameuda, thereafter Japan began to achieve rice "self-sufficiency" by dramatically converting its reliance on foreign imports into colonial imports by the late 1920s.[7] At this juncture, colonial agricultural economies, especially Korea and Taiwan, came to be inextricably linked to the metropole's food system. Although the domestic rice price fell drastically during the years of Great Depression era, the colonial rice imports continued to increase by the mid-1930s. However, a devastating drought in colonial Korea and Western Japan of 1939 suspended this state of "self-sufficiency" of rice. From 1939 to 1943, rice imports from foreign countries started to increase and imports from occupied territories in Southeast Asia seemed to temporarily alleviate wartime food shortage. But after 1943, even foreign rice supply was discontinued due to the wartime blockade of commercial shipping.[8] Needless to say, this increasingly dire food crisis formed the most important impulse behind the staple food reform measures.

It is well known that rice, especially white rice, became a central staple food in prewar Japan, albeit there were regional and social class variations. The majority of

[7] Ōmameuda Minoru, *Kindai Nihon no shokuryō seisaku: taigai izon beikoku kyōkyū kōzō no hen'yō*, (Kyōto: Mineruva Shobō, 1993), 327.
[8] Ōmameuda Minoru, *Okome to shoku no kindaishi*, 221-3.

urbanites and parts of the rural population started eating rice as a daily staple as early as the early eighteenth century; the number of rice-eaters consistently increased during the Meiji period, and when wartime food rationing was first introduced in 1939, many Japanese were eating white rice on a daily basis.[9] Apart from the actual spread of rice eating, rice, especially white rice, was deemed a tasty and desired staple food. Several prewar and postwar agricultural specialists have pointed out the widespread public desire for rice ever since the Meiji period. Tōhata Seiichi, renowned prewar agricultural economist, concluded in his 1940 book *Rice* that this insatiable desire for Japonica rice led to the transplantation of Japonica into the colonial rice fields in Korea and Taiwan, and subsequently contributed to Japan's unusual high rate of self-sufficiency in its staple food.[10] This switching from miscellaneous grains (*konshoku*) to white rice, be it cheap imported or the relatively expensive Japanese rice, was even called the "white revolution." This designation indicates how both color (in contrast to the darker mixed grains) and the popular perception of white rice being tastier attracted the commoners' palates and how unwilling people then became when asked to return to consuming miscellaneous grains (*zakkoku*) once they have tasted Japonica rice.[11]

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[9] Emiko Ohnuki-Tiernery, *Rice as Self: Japanese Identities through Time* (Princeton: Princeton University Press, 1993), 39. Nevertheless, such a consistent increase in rice consumption did not necessarily mean that rice became the everyday staple food for the entire population throughout Japan. Historical and anthropological research on prewar eating patterns have shown that the rural population and low-income urban households used mixed grains and sweet potatoes along with white rice on a daily basis. Ironically, it was during the peak of a food shortage when the all the population in Japan, including the peasants in most remote areas, came to use rice as daily food through the rationing system in 1942. Saitō Minako, *Senka no reshipi: taiheiyō sensōka no shoku o shiru* (Tokyo: Iwanami Shoten, 2002), 72.

[10] Tōhata Seiichi, *Kome* (Tokyo: Chūō Kōronsha, 1940), 247-248.

[11] Iwasaki Masaya, "Kanashimi no beishoku kyōdotai," 21. Iwasaki called the prewar Japanese society "rice-desiring community (*beishoku higan kyōdōtai*)," borrowing Watabe Tadayo's term. Ibid., 15-16.

This widespread popularity and consumption of white polished rice in fact became possible not only as a result of the increased production and importation of rice, but also due to the introduction of new milling technology and the use of adulterants for making rice whiter. During the last decade of the nineteenth century, most of the rice consumed in Japan were in fact white polished rice with these new milling machines and adulterants (*seihaku konshamai*, literally meaning sand-milled white rice). In 1914, Inoue Masanori, a prolific agriculturalist at the time, disapprovingly termed this rise in white rice's popularity the "era of *konshamai*" and criticized the tendency of rice millers to use adulterants (*konsha*) to polish rice to an extreme degree. He further assumed that the so-called white rice of his day must have been totally different from that of the Tokugawa period: "the Tokugawa *hakumai* must have rather been the equivalent of *hanzuki mai* (half polished rice) today because people then did not polish grains into pure white as we do now."[12]

Despite its popularity, the polishing of rice soon revealed its effects on consumer's health. The military first noticed the issue as early as the turn of the twentieth century when the beriberi epidemic became the most urgent concern.[13] The Imperial Army and Navy had to confront the problem of beriberi as it had seriously affected the military capability of the imperial army and navy during the wars waged against China (1894-5) and Russia (1904-5): for the former battle, beriberi patients constituted 47 percent of the total war patients and in the latter war with Russia, this problem exacerbated, with the proportion rising to 69 percent.[14] It is due to this high incidence of patients suffering from beriberi that made an increasing number of

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[12] Inoue Masanori, *Jiyō zetsudai genmai shokuyōhō* (Tokyo: Daigakukan, 1914), 27.
[13] The military considerably contributed to the popularization of white rice consumption through military provisions for draftees, who came from a broader segment of population. Katarzyna J. Cwiertka, "Popularizing a Military Diet in Wartime and Postwar Japan," *Asian Anthropology*, 1:1(2002), 1-30.
[14] Marumoto Shōzō, "Shōwa ni okeru shushoku kaizen undō shi," in *Haigamai no Kenkyū,* edited by Ryōyūkai (Tokyo: Ryōyūkai, 1936), 87.

military physicians and medical scientists turn their attention to scrutiny of the military diet. Before vitamin B1 deficiency was scientifically identified as the cause of beriberi in the mid-1910s, a sizable number of medical specialists and military personnel tried to call for military dietary reform, drawing on statistical analyses, empirical testimonials, and even on tenets of traditional Chinese medicine. Initially there was a disparity between the solutions offered by navy and army medical specialists. On the one hand, navy medical officer Takaki Kanehiro had submitted and implemented a proposal for a revised set of dietary rules centered on the bread-based western diet in 1882. On the other hand, army surgeon Mori Rintarō (well-known by his pen name, Mori Ōgai) refused to adopt the Western diet and chose to stick to the white rice-based Japanese diet. Due to this disparity, the navy was much more successful in combating beriberi during the Sino-Japanese war, and as if in response to their failure, the army eventually adopted a mixture of barley and rice as a staple instead.[15]

Despite the growing concern in the military and medical communities about its health issues, the white polished rice, which is completely stripped of its bran and germ—the portions that contain vitamins and minerals—was gaining wider popularity and even began to take root deeply in urban food culture and everyday life from the 1910s onward. From the perspective of its consumption pattern, white rice-based diet now became the indicator of the acceptable standard of living brought about by the modernization of urban and rural life.[16] Ishizuka Sagen and his like-minded advocates of the *shokuyō* campaign was the only faction that was critical of white polished rice outside the military and medical establishment at the time. As I discussed in the

[15] Alexander R. Bay, *Beriberi in Modern Japan: The Making of a National Disease* (Rochester, NY: University of Rochester Press, 2012), 39 and 64.
[16] Penelope Francks, "Consuming Rice: Food, 'Traditional' Products and the History of Consumption in Japan," *Japan Forum* 19(2) (July 2007): 157-8.

section of "rice over meat" in Chapter One, abolishing white rice and "returning" to half or less polished *genmai* was one of the central issues for Ishizuka right from the beginning of the *shokuyō* movement. Nonetheless, no *genmai* supporters appeared at least on the level of the diet reform campaign outside the Shokuyō Association, and *genmai* was publicly rejected by many leading figures of the staple reform debates during the 1920s and 1930s. For these major players, the critical issue for research and the public campaign for diet reform was the problem of how to purge people's tables of white polished *konshamai* and substitute it with either *Haigamai* or *Shichibu-zuki mai*.

The Staple Food Reform: From White to Brown

The impact of the Rice Riots sparked numerous efforts to come up with "rice substitutes" as well as scientific research to resolve the food crisis. Once colonial imports were considered as a panacea for the post-Riots crisis, the focus of the staple reform shifted to the qualitative issue of rice rather than quantitatively conserving rice and maintaining its supply. At the center of this latter part of the reform stood the debate over an ideal type of rice, a debate which emerged after a disagreement on the issue of official endorsement of *haigamai* within the council members of the Population and Food Problems Council (*Jinkō Shokuryō Chōsakai*) in October 1928. Although the passing of the Rice Milling Regulation Law in 1939 finally put an end to this decade-long rice germ debate (*haigamai ronsō*), resulting in the incorporation of *shichibu-zuki mai* into public health legislation, the disagreement provides important clues on the boundaries of public policy concern.

There were two competing factions in the debate on the type of standardized staple rice. The first was led by Shimazono Junichirō of Tokyo Imperial University and supported by physicians within the Army Provisions Bureau (*Ryōmatsushō*), with

the help of its semi-formal organization, the Friends of Food Association (*Ryōyūkai*). This faction supported the instituting of *haigamai* as the ideal food type and proper staple. *Haigamai* is a form of rice substantially polished and thus almost white-colored, yet still retaining in it the vitamin B1-rich rice germ. The second faction was led by Saiki Tadasu and the nutrition scientists and physicians affiliated with the National Institute for Nutrition Research. Unlike shimazono's championing of *haigamai*, Saiki and his group supported *shichibu-zuki mai*, a form of rice partially polished and retaining at least thirty percent of its rice bran, as the main staple.[17]

There are two aspects which are worth noting about the course of this debate and movement. First of all, the decade-long debate consistently tried to move beyond the narrow academic-military boundaries and to engage in public campaigns and education activities. The issue of dietary reform no longer merely meant beriberi control measures for the military, but became a central topic in health and resources management for the entire population. The Friends of Food Association was established in 1925 mainly for the purpose of propagating the economic and health benefits of *haigamai*.[18] Its prominent members, Kagawa Shōzō and his wife Aya from the Tokyo Imperial University Medical College, ran a home cooking research group and started publishing their popular science journal, *Eiyō to Ryōri* (Nutrition and Cooking) to spread the benefits of *haigamai*.[19] In terms of their attempt for mass education of the public, the *shichibu-zuki* camp was no different. Saiki's National Institute for Nutrition Research, in particular, was also involved in both research and propagation of nutrition knowledge among the general public. To this end, Saiki, who was later known as a 'founding father' of Japanese dietetics, vigorously delivered 300

[17] Bay, *Beriberi in Modern Japan*, 128.
[18] Marumoto Shōzō, Shōwa ni okeru shushoku kaizen undōshi," in *Saikin ni okeru haigamai no kenkyu*, ed. Ryōyūkai (Tokyo: Ryōyūkai, 1936), 89-90.
[19] Bay, Beriberi in Modern Japan, 139.

lectures while on tour throughout Japan, and the institute distributed nutritional advice and instructions through cookbooks and women's magazines.[20]

It is noteworthy that the activities by both camps were carried out against the backdrop of what Hiromi Mizuno calls the "popular science culture" (*tsūzoku kagaku bunka*) that emerged in Japan from the 1920s onward.[21] Both the promotion of science and technology during WWI and the extraordinary expansion of print mass media in the Taisho period enabled scientists and physicians involved in the debate to further publicize their research findings beyond the laboratory. This, in turn, set the stage for the later public campaigns outside medical-military circles and the subsequent legislative processes during the total war period in the late 1930s.

The second noteworthy aspect of the debate is more concerned with the nature of scientific claims as such from the both camps. Notwithstanding all the differences in claims and observations—which ranged from issues of milling technologies, suitable rice varieties for each type of milling and specific nutritional benefits of the rice bran and germ, to those of digestibility and absorption rates—the language and concepts adopted by each side clearly exemplified the scope of techno-scientific rationale officially legitimatized within the contemporary scientific and medical establishment. In many aspects, their debate was bounded by the advances in scientific and medical knowledge. For instance, with the discovery of vitamins, this important dimension of food preoccupied medical and nutritional discourse from the 1910s, and thereafter, the doctors and scientists of either side regardless of which type of rice they supported, never departed from the explanatory paradigm of vitamins. The reason why the degree and method of polishing mattered so much was precisely because the rice

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[20] Katarzyna J. Cwiertka, *Modern Japanese Cuisine: Food, Power and National Identity* (London: Reaktion Books, 2006), 121-2.
[21] Mizuno Hiromi, *Science for the Empire: Scientific Nationalism in Modern Japan* (Stanford: Stanford University Press, 2009), 143.

bran or germ was believed to retain vitamin B1, lack of which was discovered to be the cause of beriberi.

Although the participants in the rice germ debate appear to have fiercely opposed to each other, they in fact seemed to fortify a shared frontline against white rice with adulterants as well as a reserved, or at times negative, attitude toward brown rice. Therefore, when the *Yokusankai* discussed a shift from *shichibu-zuki* rice to *genmai* in September 1942 and the Cabinet endorsed the idea in November 1942, it seemed quite abrupt and unexpected for many who were previously involved in the rice issue for more than a decade. Earlier in the same year, the Ministry of Agriculture as well as the Ministry of Health and Welfare had submitted a formal opposition against *genmai* based on what they thought to be the downsides of *genmai* in terms of nutritional and economic values. In particular, they highlighted *genmai*'s indigestibility and the economical benefits of using rice bran as livestock feed instead of for the purpose of human consumption. At that point in time, the government endorsed this opinion.[22] Seven months later, however, this decision was turned on its head, and *genmai* was formally announced as new standardized rice.

As the prime objective of the 1942 Cabinet decision to institute *genmai* as the standardized rice staple was clearly specified as to aid the "total war effort (*sōgō senryoku*)," this abrupt shift in policy was undoubtedly encouraged as part of wartime food resource management. To discuss the issue from the perspective of medical specialists, Japan Association of Doctor of Medicine (Nihon Igakuhakase Kai) convened a special colloquium titled, "Wartime nutrition measures and *genmai*: tune in to policy and experience" on April 11th, 1943. Addressing an audience of three hundred medical doctors, there were a dozen speakers which included minister of

[22] "Genmai shushou ni kansuru seigan no ken" in Shimizu, *Shōwa senzenki nihon kōshū eisei shi*, 533.

Agriculture and Forestry Ino Hiroya, several professors of medicine, *Yokusankai* executives, Imperial Army personnel, and an official from the Ministry of Health and Welfare, most of who were at the forefront of public nutrition and medicine at the time.[23]

The purpose of this colloquium was not so much to debate on whether *genmai* was appropriate or not. Instead, what the event strived for was the coming up of ideas and plans to reduce *genmai*'s perceived weaknesses so that it could successfully serve as a new national staple food. In other words, the problems involved in *genmai* eating were already presumed from the beginning and the conveners were also aware of the presence of opposing research that insisted on disadvantages of *genmai*. In addition, as Minister Ino admitted the inexorability of the measure and called for cooperation on the part of medical circles, it is not difficult to glimpse some sense of reluctance and vacillation among the participating doctors.[24] An executive director of Japan Association of Doctor of Medicine, Asaoka Inetarō's opening comments is particularly revealing of such a hostile atmosphere. In his speech, Asaoka claimed that through a variety of research thus far, it turned out *genmai* is highly nutritious, yet at the same time it is also by no means entirely adequate staple food.[25] This rather withheld and ambivalent attitude seemed to be held by the majority of the speakers, while only one doctor, Saeki Tadasu, was opposed to *genmai* based on his previous research from the Imperial Research Institute for Nutrition (Eiken).[26]

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[23] "Tokushū Kessen eiyō taisaku to genmaishoku," *Nihon Iji Shinpō* 1079(1943), 3-21.
[24] Ino Hiroya was the very person who opined that *genmai* was not appropriate as the national staple and rejected a petition proposing to adopt *genmai* one year ago.
[25] "Tokushū Kessen eiyō taisaku to genmaishoku," 3.
[26] Ibid, 8. Saeki's speech was removed from the journal article with five lines of dots left along with the short title "Already in my Eiken era…" Saiki was well known as an anti-*genmai* physician and therefore, his remarks are likely to have been censored by the authorities.

Suganuma Seijirō, an administrative staff for Tokyo Association of Doctors (Tōkyō Ijikai) and adjunct consultant of *Yokusankai*, provided another circumstantial case through which one can gauge medical practitioners' general attitude toward this matter. Framing his observation as a "widening disconnection between scholarship and reality," he first confessed his ignorance on the *genmai* issue until he listened to one of the members of the *Yokusankai* Cooperation Council during the September 1942 congregation. Suganuma particularly stressed that the member who called for *genmai* standardization was a non-medical practitioner yet an ardent *genmai* eater and propagator. Through this encounter and reading a pamphlet authored by this layman reformer member, Suganuma came to throw doubt on the validity of physicians'—including himself—knowledge on this issue and became highly suspicious that their self-confidence was merely based on superficial understanding on human nutrition. In a similar vein, Suganuma also shared a consultation he held with another *Yokusankai* member, who brought in an inquiry from the governor of Gifu Prefecture: the governor himself was an enthusiastic *genmai* eating practitioner and advocate to the extent that he intended to encourage it throughout the Prefecture since May 1942. However, the governor was perplexed by the opposition from many local doctors in Gifu, and thus was eager to ask for advice from other sources of medical authorities.[27]

Suganuma's intention in bringing up these episodes seems clear. The most direct aim was to urge medical experts to reconsider their negative perceptions of *genmai* eating. However, unlike the other *Yokusankai* discussants, who emphasized the inevitability of *genmai* adoption as a wartime strategy to combat food shortage, Suganuma's exhortation further questioned the validity of predominant scholarly achievement on nutritional issues through the case of *genmai*. In his opinion, the nutritional issue was in a state of chaos so much so that scholars and practitioners alike

[27] Ibid, 11-12.

failed to reach an agreement on fundamental nutritional issues like *genmai* standardization. In particular, he juxtaposed the confusion and disarray in scientific and academic circles with regards to the issue with the complete faith of the non-medical diet reformers in the ideality of *genmai* as a national staple based on their own firsthand experiences. From these observations, Suganuma drew his critique of the general direction of existing nutrition research. Somewhat boldly and provocatively pointing out a broadening gap between medical research and commonsensical knowledge, he contended laypeople's customs and knowledge rooted in daily experience at times are rather ahead of scholarly research as was shown in the case of *genmai* standardization movement.

Suganuma's challenging attitude and eagerness to institute *genmai* diet at the national level was arguably associated with his vision for the role of "new nutrition" and medicine in improving health of the Imperial nation (*kōkoku minzoku*).[28] At the end of his speech, once again he urged the medical profession—presumably those in mainstream nutrition research represented by the *haigamai* and *shichibuzuki* rice factions—to critically reflect upon existing discourse on human nutrition by way of drawing on a paralleling trend emerging in Germany. He made a long citation of Martin Vogel's inaugural speech as the head of German Life-Reform Research Institute in Dresden in 1937.[29] Vogel's main point was, according to Suganuma, a fundamental reconsideration and critical reflection on German nutritional research in the past decades in which animal protein- and calorie-centered approach predominated throughout. Echoing with Vogel's critique of the Voit-Rubner nutritional standards, Suganuma called on the specialists in the audience to look to people's real-life

[28] Ibid, 14.
[29] Suganuma fully translated this speech "Ernährungswissenschaft und Lebensreform (Nutritional Science and Life-reform)" along with a brief introduction and a commentary. Ibid, 14-21.

experience and create new theories out of it. The doctors' role in this schema, he stressed, was to establish a new perspective on nutrition in a way that would ultimately contribute to the wartime new life reform on the home front.

It is likely that at the back of Suganuma's mind were the various measures taken by their German counterparts. Having experienced a severe food shortage that led to massive starvation and subsequent national defeat during World War One, German authorities in the 1930s remained vigilant about food and agricultural issues. As a way to achieve "nutritional autarky," Nazi regime promoted a more "natural diet" composed of domestic products, less meat and fats, and more diverse plant products. Martin Vogel and his life-reform campaign in the late 1930s was part of this broader Nazi initiative of diet reform toward better racial health, physical performance as well as efficient use of resources.[30] Martin Vogel's critique of calorie-protein centered nutritional research particularly seems radical yet also appropriately captures the principles the vegetarian and holistic faction upheld in the Nazi Life-Reform movement.[31] Given his extended citation of Martin Vogel's critique, even though Suganuma does not seem to have been supportive of either vegetarianism or natural therapies, he considered Nazi Life-Reform, particularly its diet reform, to be a necessary step forward in winning the war both at the front and home.

Furthermore, Suganuma's proposal also reveals the extent to which the planners like Suganuma had a keen interest in wartime diet reform campaigns and government measures happening in other warring countries. He added at the end of his

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[30] Corinna Treitel, "Nature and the Nazi Diet," *Food and Foodways.* 17(3)(2009), 139-141 and 145.

[31] According to Hau, Martin Vogel held a holistic perspective on the human being and particularly emphasized the importance of a "harmonious development of the entire human through a moderate lifestyle and physical exercise." As an advocate of vegetarianism and natural therapies, Vogel was against excessive meat and alcohol consumption. Michael Hau, *The Cult of Health and Beauty In Germany: A Social History, 1890-1930* (Chicago: University of Chicago Press, 2003), 134.

proposal a series of measures taken by the "enemies" such as the United States and the United Kingdom, detailing how the UK had legislated to add Vitamin A to margarine and Vitamin B to flour, as well as the manner in which the US identified the symptoms of insufficient Vitamins and minerals as "hidden hunger" and had already set out to combat it by forcing vitamin-mineral fortified bread and butter as well as rationing fruits through the Food Stamp Plan.[32] Particularly with respect to this last reference Suganuma made, it becomes clearer that Suganuma and *Yokusankai* envisioned *genmai* adoption as a necessary action corresponding to these wartime nutritional reforms undertaken in other belligerent states.

Indeed, as Suganuma implied, efficient handling of food resources and combating widespread malnutrition of its peoples were two urgent tasks for most combatant nations during World War Two. As far as the staple food is concerned, Japanese scientists and food officials were not alone in grappling with the issue of appropriate extraction rate of grains. There was a widespread consensus among scientists and food critics in the US and some European countries that darker whole wheat breads excel over white breads in overall nutritive value, especially in vitamin B. The standardized forms and degrees, however, varied among different countries, just as *shichibu-zuki*, *haiga* and *genmai* competed against each other for official approval. To give a rough sense of the policies at that historical moment: in Germany, wholemeal bread was defined as bread made from 100 percent whole grain without any bleaching agents or artificial colors in 1939[33]; the UK government introduced new

[32] "Tokushū Kessen eiyō taisaku to genmaishoku," 21.
[33] The head of the Whole Wheat Bread Committee (Reichsvollkornbrotausschuss, 1939-1945), Franz Wirz's explanation on the rationale behind whole wheat bread sounds exactly same as that of the *genmai* advocates if "bread" is replaced with "rice." Treitel summarized his point as follows: "Germans should eat foods "composed according to nature," which meant banishing breads made with flour that had been chemically mistreated with bleach or mechanically mishandled by overmilling and replacing them instead with whole-grain loaves." Treitel, "Nature and the Nazi Diet," 145.

bread with an extraction rate of 85 percent in 1940 and in spite of its low popularity, it became the standard national bread in 1942; the Canadian Government adopted "Canada approved" flours of an approximate 78 percent extraction; the US, by contrast, chose to stick to whiter bread and by the end of 1942 three-fourths of all white bread were vitamin-fortified.[34]

As though mirroring these policy trajectories in other nations, in Japan therefore, even though the majority of those belonging to the medical profession did not wholeheartedly welcome standardized *genmai* as late as the colloquium was convened in April 1943, the new findings that would prove the benefits of *genmai* had gradually came to the fore of discussions in established scientists communities. To put it differently, concurrent with the adoption of *genmai* as the standardized rice staple, there was also a move to "scientizing" its medical benefits. One good example that reveals this tendency is the revisit by Arakawa Seiji, from the Center for Contagious Disease in 1942 to Odashima village in Yamagata Prefecture in order to critically re-evaluate the previous epidemiological survey that had contained positive results of *genmai* eating vis-à-vis its general health effects of the villagers. Despite the skeptical view he initially held, he found out that the total medical expense of the entire village had decreased to one seventeenth of that spent when the villagers used to eat white rice. In addition, he also noticed the evidence of increased work performance and decreased diarrhea rates. With the positive observations he made, Arakawa concluded that brown rice is entirely appropriate as the national staple under proper nutritional guidance.[35]

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[34] Uwe Spiekermann, "Brown Bread for Victory: German and British Wholemeal Politics in the Inter-War Period," in *Food and Conflict in Europe in the Age of the Two World Wars*, ed. Frank Trentmann et al. (Houndmills, Basingstoke, Hampshire; New York: Palgrave Macmillan, 2006), 152, 163; Thomas C. Desmond, "Bread - Your New Perfect Food" in *Food In War and In Peace: Consolidated Report of the New York State Joint Legislative Committee On Nutrition*, ed. Albert J. Abrams et al. (Albany, 1944), pp 160-161.

[35] Hagiwara, Hiromichi, *Eiyō to shokuyō no keifu* (Tōkyō: Sanrōdo, 1985), 164-5.

Another researcher from the Center for Contagious Diseases and also a professor at Tokyo University's Medical School, Yaoi Hidetake conducted a follow-up clinical observation in a youth school's dormitories in Gifu Prefecture. Also as a speaker at the colloquium, Yaoi stressed the significance of "evidence over theory (*ron yori shōko*)" in his observations on the actual and overall health effects resulting from a simple switch from white rice to *genmai* for one month. He triumphantly contrasted the disease incidence rates between the two groups (from the *genmai* dormitory, 8 out of 600 and from the white rice *dormitory*, 55 out of 521 students) and concluded that *genmai* does indeed promote overall health in its consumers.[36]

This scientizing of *genmai* allowed for the eventual acceptance of it as a viable staple for wartime efforts. A clear indication is the favorable response on the matter from its former opponent. Marumoto Shōzō, a military physician from the Army Provision Bureau, authored a book on the "food war" (*shokuryō sensō*) in December 1943. Marumoto was a representative figure in the *haigamai* campaign and the Army Provision Bureau under his leadership had led the 1920s staple food reform movement in collaboration with Professor Shimazono Junichirō. Unlike his earlier position against *genmai*, Marumoto in his book demonstrated a similar understanding on wartime nutritional campaigns with Suganuma, also endorsing *genmai* as the most efficient national staple. He argued that the previous European war was in fact a "food war" among nations where securing foodstuff for both military and the home front eventually determined the outcomes of the war. Therefore, he claimed, the key to victory in the ongoing war was to strive to minimize waste and maximize food efficiency. *Genmai* eating, due to its nutritional superiority, was deemed to be more

[36] "Tokushū Kessen eiyō taisaku to genmaishoku," 11. In addition, Yaoi also added a recent experiment conducted by Ishihara Fusao at the Tokyo Hygiene Experiment Station. According to Yaoi's summary, Ishihara's experiment demonstrated that the absorbed amounts of each nutrient of *genmai* was higher than those of white rice.

appropriate vis-à-vis other kinds of rice and hence could be the most rational choice. Along with this statement, he further suggested diversifying the existing rice-based staple and popularizing Japanese style national bread mostly made of brown rice powder, multi whole grains, and potato powder.[37]

As I have highlighted above, *genmai* was never placed in the center of discussions on staple reform in the previous decade leading up to the 1939 and 1942 standardizations and had largely remained in the limited circles of food gurus and health reformers. However, once *genmai* was officially adopted, scientists, clinical doctors, bureaucrats, and military personnel alike started shedding new light on *genmai* as the ultimate staple food to win the war. Referencing other states' nutrition policies at the ongoing World War, the government's staple food reform policy followed the trajectory of making rice darker, unadulterated (with chemicals), and unpolished. In this process, the medical rationale behind the adoption of *genmai*, the "darkest" type of rice, was not dissimilar to the promotion of other types of rice such as *haigamai* or *shichibuzuki*: they all anchored their rationale in the presence of vitamin B.

However, even though this largely nutritional explanation was certainly required and also sufficiently functioned in the realm of official government policy, these nutritional effects and evidential data alone do not exhaustively explain the existence of the small-scale spontaneous movements toward darker rice. When the *Yokusankai* initiated *genmai* eating into its total mobilization program in September 1942, this move did not happen in a vacuum. As Suganuma clearly demonstrated how he encountered fervent laymen *genmai* advocates, there had already existed voluntary activities that provide grounds for this project. In some aspects, these pre-existing *genmai* movements fit perfectly into *Yokusankai*'s seemingly contradictory goal to

[37] Marumoto Shōzō, *Shokuryō Sensō* (Tokyo: Shintaishūsha, 1944).

mobilize spontaneity "from below." It should be noted that this expression of "from below" in my discussion does not refer to more conventional meanings of "people," "lower classes," or any sense of "the oppressed" and "the marginalized." On the contrary, as far as the *genmai* movements in this specific period were concerned, those active leaders and participants were rather from a higher or middle stratum. That being said, I use the metaphor of "bottom-up" here since it appropriately captures the complexity demonstrated in the non-unitary vectors of the dietary reform initiative during this period. In the next section, I will return to the *shokuyō* connection to *genmai* campaign as an attempt to understand the vitality and persistence of the diverse *genmai* supporters whose central tenets eventually converged with the State's and the *Yokusankai*'s interest.

Bodily Awareness: Healing, Eating and Ethics

In the April 1943 special *genmai* colloquium, there was an idiosyncratic physician who brought in a small pot and one *gō* (0.18L) of *genmai* for an on-the-spot sampling for the participants. This enthusiastic propagator of *genmai* was renowned bacteriologist Futaki Kenzō (二木謙三 1873-1966). Futaki was known as the discoverer of two dysentery bacilli and one of the cofounders of The Japanese Association for Contagious Diseases (*Sendenbyō Gakkai*, f.1925). While devoting most of his life to bacteriological research and teaching at Tokyo University Medical School and Nippon Medical School on one hand, Futaki was a high-profile *genmai* supporter as well as the inventor of so-called "Futaki-style" abdominal breathing. Born a sickly child with chronic indigestion, a sore throat and nephritis among many other ailments, he thus sought to find ways early in his late teens to improve his health. His abdominal breathing was directly inspired by the writings of *kokugaku*

scholar and physician Hirata Atsutane (平田篤胤 1776-1843).[38] In a similar vein, he held an extensive interest in the traditional art of preserving health (*yōjō*) and the techniques of self-regulation and moral cultivation. His involvement in the *shokuyō* movement was another expression of his broader interest in the non-orthodox health-preserving practices throughout his lifetime.

Futaki was also a frequent contributor to the Journals *Shokuyō* and *Shokumotsu no Yōjō* both of which espoused Ishizuka Sagen's doctrine of *shokuyō*. His tone in these journals and major women's magazines was closer to a physician health guru who was equipped with both medical expertise and folk wisdom on life and health. Futaki was also particularly interested in youth education and had a close connection with Hasunuma Monzō (蓮沼門三 1882-1980) and the latter's Shūyōdan (修養団), a cross-social class and cross-regional youth self-cultivation program. By the time Futaki put considerable effort to propagate the benefits of *genmai* in the 1930s, he had already earned fame as a *genmai* and *shōshoku* (light or little eating) guru. In a bid to promote his beliefs, Futaki published a six-volume series of books between 1932 and 1941on nutrition, *genmai* eating and national economy for the general public. The second volume of the series, entitled *Why Should We Eat Brown Rice* (1934), exclusively deals with the issues regarding *genmai* in every detail.[39] Futaki's discussion of *genmai* eating seems like an all-inclusive baggage of all the conceivable benefits and meanings of this staple food ranging from nutritional, economic, holistic, and even to spiritual aspects of eating *genmai*.

At the start of *Why Should We Eat Brown Rice*, he discusses the quantitative loss of each nutrient in white rice compared to brown rice. Drawing upon the research

[38] According to Takahashi Hanae, Futaki abdominal breathing method is also similar to then popular Okada style breathing. See Takahashi Hanae, "Futakishi fukushiki kōkyūhō ni truite," *Taiikugaku Kenkyū* 51(3)(2006), 321-2.
[39] Futaki Kenzō, *Naze genmai denakereba naranu ka* (Tokyo: Dainihon yōseikai, 1934).

results from the Osaka Public Health Laboratory, Futaki explained the amount of each nutrient loss in washed white rice, in comparison to brown rice respectively. Taken as a percentage vis-à-vis brown rice, the total weight loss for washed white rice is 13.4%; starch 7.2%; protein 32%; fat 87%; minerals 89.3% (the majority of which being phosphoric acid); and lastly, fiber 92.2%. By detailing these figures, he stressed the nutritional inferiority of white rice as being bereft of the majority of beneficial and crucial nutrients by processes of milling and rinsing. He then further pointed out the remaining nutrients in polished rice such as starch, protein and fat are often spoiled and deteriorated as well. On the contrary, *genmai*, he especially emphasized, is a great source of minerals and fiber, an aspect which had been relatively ignored in contemporary nutrition science.[40]

As for the most controversial issue of indigestibility, Futaki critically reviewed a report on the rice digestibility experiment submitted by the Imperial Government Institute for Nutrition (Eiken). Against the report's conflating of actual absorption amount and the absorption rate, he argued that these two statistics should be differentiated. While admitting that polished rice has a higher absorption rate of 91.6% compared to brown rice at 74.5 %, he argued that the more important factor is the very amount of each nutrient absorbed from the same weight of white and brown rice. Since *genmai* contains a much higher amount of each nutrient than white rice does, Futaki claimed that it could offer a much higher intake of each nutrient, four times as much of fat and five times as much of minerals.[41]

Another important thesis of Futaki's *genmai* promotion presented in the book was its cost-effectiveness. Every time he compared nutritional loss of white to brown rice, the quantity of loss was translated into monetary value. He enumerated the cost

[40] Ibid, 2-10.
[41] Ibid, 13-20.

involved in every stage: the milling process; nutrients loss from milling; deterioration of crops during storage; potential medical cost of overeating; the cost of rich and nutritious side dishes to complement nutritionally bereft white rice. Each household, he concluded, could save 320 yen per year only if they switch from white to brown rice and at the national level this meant a huge cut down on food expenses which would amount to the total sum of the annual imperial budget.[42]

In this sense, Futaki's quantitive analysis of nutrients of white and brown rice does seem to share the same language of modern science and medicine adopted by the academic-military science communities who participated in the rice germ debate. The fourth chapter of the book, however, reveals the crux of Futaki's argument on *genmai* eating, which attempted to go beyond the conventional language of nutrition science and medicine of the time. The problem for Futaki was not only the quantitative matter of containing "more" bran and germ due to a lesser degree of milling; but also a qualitative matter that had rarely been addressed by nutrition scientists at the time. He argued that both *shichibu-zuki* rice and *haigamai* are meaningless because they are lifeless food (*shimetsu shoku*), while only *genmai* contains the vital nucleus (*seimeiso*), which enables it to maintain vitality for life. The truly living part of a rice grain, he claimed, is the cells residing near the boundaries between the outer fat and the inner chlorophyllous layers. This is what he calls "vital nucleus," which could only be found in this part of a rice grain, in which cell division takes place. As such, he argued that only *genmai* contains a life force and germinating ability up until the point of ingestion. Citing this "living" food as promoting a more natural way of ingestion, Futaki, and many other advocates, regarded *genmai* as an exceptionally "perfect food" (*kanzenshoku*).[43]

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[42] Futaki, *Naze genmai denakereba naranu ka*, 61-66.
[43] Ibid, 50-53.

In that chapter, this nutritional feature of *genmai* as the "perfect food" is once again reiterated alongside the economic benefit of *genmai,* the recurring theme of the book. Since this perfect food does not require the help of more nutritionally heavy and expensive side dishes such as meat and dairy products, it can be accompanied by some simple and less costly side dishes such as miso soup, vegetable pickles or sea vegetables. At a deeper level, however, Futaki's claims on vitality and perfect food offer a glimpse of an organicist and holistic approach to the human body and life. Considering the continuous renovations in food and pharmaceutical technologies of the time, he seemed to have intentionally stressed the "natural" property of vital nucleus (*seimeiso*). In another short essay on artificial food, he once warned the readers of the dangers of artificially processed ingredients such as artificial butter or milk made from fat. He asserted that even though these products appear and taste like real butter or milk, their intake impedes the development and reproduction of living organisms. He astutely condemned the idea of magic nutrients as sheer fantasy: the idea that when chemically perfect nutrients are created, people would not have to eat as much as they eat today. He is convinced that humans will never be able to create such magic ingredients superior to natural foodstuff, since no matter how advanced science and technology become, Futaki claimed, "we are incapable of synthesizing living cells on our own.[44]"

It is difficult to say for sure which of the many elements of Futaki's evangelistic *genmai* promotion were most influential in attracting its supporters. However, paying close attention to Futaki and his supporters' narratives on their personal discoveries of "the *genmai* option" offers a glimpse at how individual bodily experience of healing could have possibly kindled other advocates' enthusiasm for

[44] Futaki Kenzō, "Jinkōteki shokumotsu wa byō'in to naru," *Shokuyōzasshi* 9, no.9 (1923): 9-10.

genmai. Although Futaki's claims on the benefits of *genmai* seem to have encompassed diverse considerations—economic, nutritional, and his perspective on life and nature, these aspects all seem to invariably stress the experiential aspect of his dietary regimen.

The centrality of this experiential aspect to his dietary regime can also be glimpsed in a 1930 roundtable discussion convened by Ryōyūkai, an auxiliary organization of the Army provision Bureau. Attended by individuals from various stratas of society, the roundtable discussion featured eight participants who were physicians and nutrition-related social campaigners. In that roundtable, the participants celebrated light eating (*shōshoku* 少食) as a judicious prescription for the era of the Showa Depression. By discussing the meaning and methods of *shōshoku* and presented it as a desirable and rational eating habit especially in the face of malnutrition and starvation caused by the recent economic depression.[45] For instance, one other participant, Okazaki Keiichiro, a physician who had previously authored *The History of Rice Eating in Japan* (*Nihon Beishokushi*), argued that eating three meals a day was in fact a relatively recent phenomenon, and that eating two meals was a predominant eating pattern in Japan prior to the Genroku period (1688-1704). As for methods of light eating, Futaki emphasized that a prerequisite for *shōshoku* was eating perfect foods such as *genmai* as well as thorough mastication (Fletcherism). Notably, all the discussants themselves were the practitioners of light eating based on *genmai* who were motivated by deteriorating health conditions and digestive disorders. Futaki himself said he happened to skip lunch for a few days and realized that his hyperacid had disappeared. Drawing on their experiences of long-term practice, they demonstrated a deep conviction for medical efficacy of the one or two-meal eating pattern, centering on *genmai* with miso soup and vegetable side dishes, and occasional

[45] "Shōshokushugi zadankai," *Ryōyū 5*(1930), 62-72.

small amounts of fish or meat. Even though the moderator's explanation introduced the significance of light eating on scientific, historical, and empirical grounds, what made *shōshoku* sound authoritative and striking most likely came from the fact that it was physicians' or health experts' disclosure of their own experiences of healing through certain eating habits.

Perhaps because such self-experimentations, intentional or not, were premised upon each individual practitioner's observation and perception that could not ultimately be "scientifically proven." This may perhaps be the reason why light eating was suggested as an ism (*shōshokushugi*) or a belief. This denomination is reminiscent of other dietary regimes such as vegetarianism (*saishokushugi*) or grainism (*kokumotsushugi*), which at best implied an unorthodox remedy or a fad, rather than a legitimate and universal principle. Not surprisingly, another participant, the physician Nagai Hisomu rather exaggeratedly commented that Futaki's enthusiasm for unusually ascetic one-meal a day seemed like a "religious faith."[46]

Such a "faith" through one's embodied experience was more dramatically shown in the case of another participant Satō Keitarō, a coalmine dealer and social work activist. Also influenced by Futaki, Satō was cured of digestive disorders he had suffered for years by completely changing his diet for only one week.[47] Now

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[46] Ibid, 69. Indeed, *genmai* eating more often than not conveyed religious connotations even from earlier periods of modern Japan, and Nagi might have had this cultural meaning in mind when he commented on Futaki's attitude. For example, Takeda Hōjun, a Jōdo buddhist monk and head of the Tokyo Spiritual Healing Clinic, also applauded Futaki for his adherence to a natural way of life, and envisioned unpolished *genmai* not only as a healthful option but also as a means to boost spiritual energy. Attributing the low life expectancy and high infant mortality rate in Japan to the devastating white rice eating habits, Takeda interpreted the widespread consumption of excessively polished rice as a sign of spiritual and physiological decay of the Japanese nation. Takeda asserted that in order to stop further deterioration that had been accelerated along with the program of civilization and enlightenment since the Meiji period, the Japanese should switch their staple "back to *genmai*." Takeda Hōjun, *Shinrei no Iryoku* (Tokyo: Nihon Shinrei Daigaku Shuppanbu, 1926), 165-172.

[47] Ibid, 64.

converted as a fervent *genmai* eating backer, Satō donated funds to establish The Great Japan Life Association (Dainihon Seikatsu Kyōkai) to promote *genmai* eating and fletcherism in 1935. In four years, he donated two hundred thousand yen to set up the Food Resource School (Shokuryō Gakkō).[48]

Not surprisingly, a "conversion" to *genmai* was occasionally accompanied by a more political sense of "conversion." Hisatome Kōzō, the former Yūaikai labor movement leader joined the Shokuyō Association after an encounter with Sakurazawa Yukikazu. Also experiencing a dramatic recovery through *genmai*-based regimen, he became a fervent *shokuyō* advocate and then later the Association's leader.[49] Completely converted from a communist to a passionate nationalist, Hisatome took a more aggressive perspective than other members in promoting *genmai* as the national staple. He criticized the idea which merely focused on *genmai*'s nutritive and economic benefits, and called for a fundamental social transformation through changing the nation's staple. For Hisatome, returning to the *genmai* eating habit should not be a mere temporary measure out of wartime exigency, since changing individuals' bodies is a starting point of socio-economic and political transformation. He declared, the most precious grain of all kinds—rice—is a gift from gods and thus the source of life for all the Japanese. Therefore, it was imperative for the Japanese to treasure and not deform this sacred root of life. By using the term restoration of diet (*shoku no ishin*), he tried to evoke the imagined historical continuity through the medium of the natural state of rice, *genmai*.[50]

This chapter illuminated the process in which *genmai* eventually gained the policy-level legitimacy in 1942. When the *genmai* legislation process sparked

[48] Ibid, 64; Hagiwara Hiromichi, *Eiyō to shokuyō no keifu*, 162.
[49] Sakurazawa Yukikazu, ed., *Manshūkoku no Kōsei Undō* (Tokyo: Shokuyōkai, 1940).
[50] Hisatome Kōzō, *Nihonjin to Genmaishoku* (Tokyo: Teishin Gakkan, 1943).

scientific research and experiment, it offered a new vehicle to convey various impulses toward ethical and social reforms to better prepare for the continued total war. The *Yokusankai* initiative to spread *genmai* eating habits captured such pre-existing aspirations in a way that would contribute to the wartime new order. As was shown in this chapter, the presence of these spontaneous *genmai* enthusiasts and their internal narratives cast light on the complexity behind how wartime mobilization was expected to work. Just as prewar ultra-nationalism tended to be painted as monolithic irrationalism in retrospect during the postwar period, the cultural undertones attached to *genmai* eating hardly departed from essentialist, spiritual, anti-modern, and back-to-nature traditionalism. However, the issue of wartime standard rice set the stage for the multiple competing motivations behind how to feed and sustain the living bodies. Its proponents took in various methods and motivations in championing *genmai* as *the* staple—the technocratic rationalizing force, aspiration for naturalist and spiritual regeneration, and organicist and holistic approach to life and society. *Genmai* became a focal point where these forces converged.

CHAPTER FIVE

TABLE FOR THE EMPIRE: SUGAR, MODERNITY AND HEALTH

In Europe, sugar became a significant food ingredient for the majority of peoples only after the 1800s when sugar cane plantations in the Caribbean and South America gained capital and intermediaries for a wider circulation.[1] Around this time period, its earlier use for the medicinal purposes gave way to its usage as sweeteners and preservatives. Once it became part of ordinary people's daily food intake in the nineteenth century, this change became irreversible. Anthropologist Sidney Mintz succinctly summarized the changed consumption pattern and meaning of sugar consumption in the United Kingdom as follows: sugar transformed itself from a rarity to a luxury and finally into a necessity between 1650 and 1850, and its usage as quick energy had been spread around the world since the opening of the twentieth century.[2]

Just as the history of sugar production and its mass consumption in Europe was inextricably bound up with European colonialism in the Americas, the mass consumption of sugar in Japan was realized with the expansion of the Japanese Empire. During the early Meiji period (1868-1912), sugar was still relatively expensive, and was often deemed a symbol of the Westernized upper class culture. It would take a few more decades before one sees its introduction for mass consumption by lower sectors of society. It is widely known that Fukuzawa Yukichi, the leading educator and enlightenment thinker, was one of the enthusiastic pushers of meat eating. What is lesser known is the fact that he paid attention to the consumption of sugar as well. In particular, Fukuzawa opposed a tax increase on sugar consumption

[1] Fernand Braudel, *Capitalism and Material Life, 1400-1800* (New York: Harper and Row, 1975), 156-8.
[2] Sidney Wilfred Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Penguin Books, 1986), 147-8.

and encouraged people to eat enough sugar or sugary foods as a means of supplementing carbohydrate intake, especially for those who were reluctant to consume meat.[3]

Indeed, many Meiji intellectuals and officials highly valued the importance of sugar, both in terms of production and consumption. The sugar refinery industry, which developed along with the cheap and stable supply of raw sugar from the newly acquired colony of Taiwan, became one of the substantive industry sectors in the burgeoning Japanese capitalism.[4] On the side of consumption practices, refined sugar, the very product of this new industry, earned a series of cultural connotations representing modernization, technology, and progress. The claim that a more civilized and industrialized nation consumes more refined sugar was a widely held opinion at the time. Thus, whiter sugar signified a more advanced technology on the part of industry as well as a higher living standard and purchase capability on the part of consumers.

This chapter briefly looks first at how refined sugar, just as in the histories of other modernizing countries in the world, came to be integrated into part of daily food culture in Japan, and how the meaning and desire projected onto sugar consumption reflected the social imagery on race and modernity. Then, I will illuminate how the *shokuyō* theorists sought to intervene in this predominantly favorable cultural atmosphere toward sugar, especially through a critique of the excessive sugar consumption by the Japanese. Lastly, by looking at their activities to reform Japanese

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[3] Fukuzawa Yukichi, "Satō ni kazei no rigai," (*Jijishinpo*, August 21, 1893) in *Fujizawa Yukichi Zenshū 14 kan* (Tokyo: Iwanami Shoten, 1961), 530-532; Fukuzawa Yukichi, "Fujin himan no setsu," in *Fukuzawa Yukichi Chosakushū* 10 (Tokyo: Keiō daigaku shuppankai, 2003), 340-2.

[4] Ten sugar refinery companies were included in the list of one hundred biggest companies in Japan as of 1911. As the rapid expansion of heavy industry occurred during the 1920s and 1930s, the number decreased to four in 1937. Kase Kazutoshi, "Shokuhin sangyōshi no kadai to ronten," in *Senzen Nihon no Shokhin Sangyō,* ed. Kase Kazutoshi (Tokyo: Tokyo Daigku Shakai Kagaku Kenkyūjo, 2009), 3-4.

migrants' eating patterns in Manchuria, this chapter aims to demonstrate the ways in which the *shokuyō* campaigners sought to construct a new lifestyle grounded upon the principle of *shindo fuji* (oneness of the body and soil) as a supposed solution to the deteriorating state of modernity, represented by the presence of the diseased Japanese bodies.

Production and Consumption of Sugar: A Colonial/Modernist Enterprise

Sugar cultivation and related industries became a challenging yet critical enterprise for the Meiji government. The government tried every possible means to promote domestic sugar plants cultivation in the early Meiji period, ranging from exploring sugar cane substitutes such as sweet sorghum to introducing sugar beets in various areas in Hokkaido, Shikoku and Kyūshū.[5] Local governments distributed sugar-manufacturing technologies and supported various pilot programs to boost domestic production. Even though the domestic demand for sugar showed a gradual increase during the Meiji period, domestic production did not meet the demand. Up to the late 1870s the amount of imported sugar far exceeded domestic production, and the government concerns about the growing trade deficit led to endeavors to increase domestic production. These initial attempts, however, eventually failed and most of the domestic cultivation except in Okinawa and Hokkaido faded away after the 1880s.[6] Between 1897 and 1903, 23 million yen was spent on sugar importation, which amounted to 54 percent of the total foreign trade deficit.[7]

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[5] Shōwa Joshi Daigaku, ed. *Kindai Nihon Shokumotsu Shi* (Tōkyō: Kindai Bunka Kenkyūjo), 48-9.

[6] By the end of the nineteenth century, domestic sugar production including one from Okinawa, met only 18 percent of the total demand. Sucheta Mazumdar, *Sugar and Society in China* (Cambridge, MA: Harvard University Press), 375.

[7] Chih-ming Ka, *Japanese Colonialism in Taiwan: Land Tenure, Development, and Dependency, 1895-1945* (Boulder, Colo.: Westview Press, 1995).

Subsequently, a dramatic change occurred with the acquisition of Taiwan, where sugar cane had traditionally been cultivated. Japanese *zaibatsu* capital, such as Mitsui and Masudaya, began to exercise control over raw sugar market first and then took over the local sugar refinery industry by establishing large-scale mechanized sugar refinery under the auspices of the Taiwanese Governor General. This exclusive access to raw sugar from Taiwan enabled the full-fledged development of Japanese sugar industry both in Taiwan and Japan. From 1929 onward, the ratio of sugar production in Taiwan accounted for more than 80 percent of the total production within the Japanese Empire and it was acclaimed that "self-sufficiency" of sugar within the Empire was finally realized. Taiwan became the chief raw sugar producer for the Japanese market, and Japan was transformed from refined sugar importer to exporter.[8]

On the consumption side, it was not until around WWI that the domestic per capita consumption soared. Between 1902 and 1906 domestic consumption of sugar was recorded at 4.7kg per capita. This figure then almost doubled in the 1917 and 1921 period, and continued to increase to 13.4kg between 1932 and 1936 until it eventually reached its peak at 16.2kg in 1939.[9] Sugar and sugary foods came to be integrated into the daily food culture especially during the interwar period, to the extent that sugar became the first food ingredient for rationing in June 1940. Refined sugar, once a rare and luxurious item in the late nineteenth century, eventually became one of the necessities in the lives of a broader population.

For household consumption, refined sugar came to be used not only as a sweetener but also as an essential ingredient for daily home cooking. Eighty percent of the entire domestic sugar consumption, however, was through the products of the

[8] Yamashita Kyūshirō, *Satōgyō no Saihensei* (Tokyo: Nihon Satōkyōkai, 1940), 3.
[9] Yamashita Kyūshirō, *Satōgyō no Saihensei,* 18.

small and large-scale food industry, ranging from canned food, street sweets, artisan candies, to Western-style manufactured sugary foods such as chocolate and soft caramel. The growing popularity of manufactured sweet products was also a sign of the new modernized lifestyle, which was called cultured living (*bunka seikatsu*), in which hygiene and efficiency among others functioned as the new guiding concepts to refashion the everyday life of the urban population.[10] It is through this language that the major confectionery companies such as Meiji and Morinaga, advertised their milk chocolate and caramel as healthy and nutritious treats. During the Second Sino-Japanese War moreover, these companies used the wars as a means to further market their products, and their sweet treats became one of the popular items placed in comfort bags (*imon bukuro*) for the soldiers at the China front.[11]

Given that physicians, nutritionists, social scientists and agriculturalists of the time championed nutritional benefits of sugar, it was by no means far-fetched for these confectionery companies to emphasize hygienic and nutritional features of sugar in their advertisements. In the late Meiji period, the relationship between dental caries and sugar consumption was often disapproved, and it was not uncommon to encounter an argument that sugar is an economic and efficient energy booster, which helps warm up the body and recover from fatigue.[12] Physicians particularly recommended sugary snacks between meals for children, who were supposed to require more frequent and sufficient caloric intake.[13] Even though some scientists doubted the nutritional effects

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[10] Jordan Sand, *House and Home In Modern Japan: Architecture, Domestic Space, and Bourgeois Culture, 1880-1930* (Cambridge, MA: Harvard University Asia Center, 2003), 194-8.
[11] Barak Kushner, "Sweetness And Empire: Sugar Consumption in Imperial Japan," in *The Historical Consumer: Consumption and Everyday Life in Japan, 1850-2000*, ed. Penelope Francks et al. (New York: Palgrave Macmillan, 2012), 140-3.
[12] Okada Isao, "Satō no hanashi," *Katei to Eisei* 15-12 (1939): 40; Takayama Kisai, *Eisei Hoshi Mondō* (Tokyo: Self-published), 12-13; "Subarashii kōyō," *Chūgai Shōgyō Shimpō*, December 15, 1925.
[13] Kōno Shinji, *Nihon tōgyō hattatsushi*: *shōhi* (Kōbe: Nihontōgyōhattatsushi hensanjo), 378-381.

of sucrose, overall they remained a minority within the mainstream medical discourse and popular magazines. In sum, sugar consumption continued to increase until the wartime food shortage and rationing actually restricted allowance of daily provisions. Against this backdrop, a group of people, directly or indirectly related to the *shokuyō* campaign, spearheaded the critique of sugar consumption and the cultural meanings attached to it.

"Sugar Is Toxic!": *Shokuyō* Perspectives on Sugar

Sugar had long been the target of criticism by *shokuyō* theorists before some of the mainstream medical scientists started casting a suspicious eye on its health benefits in the late 1930s. In his 1896 book, Ishizuka Sagen once briefly mentioned possible deteriorating effects of refined sugar in a similar manner as his critique of white rice or other milled grains losing the balance of nutrients in the process of milling.[14] In 1910 the journal *Shokuyō* carried a lengthy excerpt from the daily newspaper *Yorozuchōhō*, titled "Sugar is harmful" in which naturally occurring sugars from fruits should be differentiated from artificial sugar, which was reported to cause lime starvation and subsequent underdevelopment of children.[15]

In his 1921 book *Shokumotsu to Kenkō* [*Food and Health*], the *genmai* advocate Futaki Kenzō also stressed the relationship between sugar intake and tooth decay, which seems to approximate our contemporary understanding. In particular, he goes in depth into what happens to sugar in one's mouth as it is consumed: sugar gets melted with an enzyme in saliva thereby forming lactic acid and ends up settling in tiny cracks in your tooth enamel; this lactic acid dissolves the calcium phosphate of enamel, and this process leads to the start of tooth decay. He then further explained

[14] Ishizuka Sagen, *Kagakuteki Shokuyō Chōjuron* (Tokyo: Hakubunkan, 1896), 310-311.
[15] "Satō wa yūgai nariya," *Shokuyō* 35 (1910), 39-40.

that excessive sugar intake is harmful not only for oral hygiene but also for the function of the stomach. Sugary foods quickly reach the stomach thereby causing an excessive protective mucus secretion (gastric catarrh) while sugars taken through the forms of grain, bread or vegetables undergo digestive processes from the mouth and thus leaving only a little sugar by the time they arrive in the stomach. Therefore, Futaki claimed, the problem of sugar lay in its rich density that would burden the digestive system.[16]

However, it was not until in the 1930s that Sakurazawa Yukikazu, then one of the leaders of the Shokuyō Association, submitted the most profound and severe critique of sugar consumption. Although most of his dietary regimen based on *shokuyō* principles contained warnings against excessive consumption of sugar and meat, Sakurazawa eventually published a book in 1939 entirely devoted to these two presumably most harmful foods in the modern Japanese diet. In the preface of his book titled *Satō no Doku to Niku no Gai* [*The Poison of Sugar and Harms of Meat*], Sakurazawa resolutely challenged a widespread notion that sugar is a necessity. He situated his claim on the harmful effects of sugar on the human body in his general critique of modern biomedicine, which he believed to be more interested in dealing with the sick after the advent of illness rather than preventing these diseases beforehand. Sakurazawa urged his readers to rethink "raw materials" that constitute their own bodies. Using the metaphor of building or clothing made of poor materials gets easily worn down, he argued that a human body constituted of poor substances, i.e., bad foods, is helpless and vulnerable to the attacks of virus and bacteria as well. For Sakurazawa, removing the microorganisms that cause cholera or tuberculosis can never be a fundamental measure to prevent diseases. Instead, it is crucial that one constructs a robust and healthy body through eating good foods, and this practice

[16] Futaki Kenzō, *Shokumotsu to Kenkō* (Tokyo: Shūyōdan, 1921), 8-11.

ought to come first. In this sense, he claimed that removing sugar and meat from the Japanese table was a first step forward in renovating and purifying the substances that constitute the Japanese bodies.[17]

Sakurazawa argued that the problem of sugar above all arose out of the confusion between *tōbun* [glucose] and *satō* [sucrose], both as colloquial and medical terms. He explained that *tōbun* is a kind of nutrient contained in grains and vegetables, while what people call *satō* at the time is processed and refined sugar in various degrees. Accordingly, *Tōbun* is essentially required for the human body, while *satō* is not. Sakurazawa lamented that in spite of this basic observation, modern nutrition and medicine had been encouraging people to take more *satō* as if it is a great source of *tōbun*, or a representative source of carbohydrates. In modern societies, he bitterly complained, *satō* inappropriately acquired the position of an essential source of *tōbun*, due to its appeal to popular appetites for sweetness and, more importantly, to a drastic fall in its price. In addition, he deplored the practice that conventional sweeteners such as black sugar, honey, or *amazake* [sweetened hot drink made from wine lees] were replaced by mechanically refined sugar only because processed sugar was a cheaper alternative. In short, what he thus diagnosed as the problematic characteristic of modern Japanese diet is this very overconsumption of *tōbun* in general, not only from the intake of general foods but also from unnecessary intake of refined sugar (*satō*).[18]

The question then is, on what grounds did Sakurazawa claim that sugar was detrimental to health? How did he draw on the fields of science and health research to substantiate his arguments above? On the whole, Sakurazawa drew on two distinct kinds of sources to develop his argument: the first from results obtained through laboratory experiments and the second from personal testimonies based on clinical

[17] Sakurazawa Yukikazu, *Satō no Doku to Niku no Gai* (Tokyo: Dai Nihon Hōrei Shuppan, 1939), 2-3.
[18] Sakurazawa, *Satō no Doku to Niku no Gai*, 9-10.

experience. In terms of the first kind of source taken from laboratory experiments, Sakurazawa praised a report submitted by Professor Katase Watashi at Osaka University of Medicine as a groundbreaking achievement in the research on the harmful effects of sucrose. Citing a long passage from the report, he believed that the animal experiments conducted by Katase scientifically proved adverse effects of sucrose, store-bought white sugar in this case, on living beings. In particular, Sakurazawa emphasized Katase's observation that when house rabbits and dogs were fed an excessive amount of sucrose, health problems tend to emerge. According to the report, the Katase team noticed the deformations of thorax and pelvis on rabbits as well as dental caries on dogs, and correlated these ailments to an increase in acidity in the blood, or what they called acidosis, due to the excessive consumption of sucrose.[19]

As was typical in Sakurazawa's writings, he supplemented the laboratory report with personal testimonies based on clinical experience. This was the second kind of source used in substantiating his critique of sugar consumption. In one particular testimony, he introduced an anecdote narrated by a youth, Ueno Shōichi and a physician Kashiwamura Tamotsu, who treated Ueno. According to Sakurazawa, Ueno professed his "awakening" experience through the treatment of a serious ailment brought about by excessive and rapid consumption of sugar. According to Ueno, he was in critical condition brought about by acute sugar poisoning and received an immediate and appropriate treatment using a saline injection in the Kashiwamura Clinic. From the tone taken by the narrator, the reader can easily notice that a saline injection was not a conventional treatment for such a symptom. According again to Sakurazawa, Doctor Kashiwamura acknowledged that if he had not known about the *shokuyō* principles, he would never have thought of asking Ueno what he had eaten nor would he have given him a saline injection. Accordingly, Dr. Kashiwara based his

[19] Ibid, 22-24.

treatment on Ishizuka's potassium-sodium spectrum. He pointed out that sugar is located near potassium and far from sodium, and since sugar in the human body combines with sodium or calcium and then is excreted from the body, an excessive intake of sugar therefore has a similar impact to that of excess potassium. This is how he came up with an idea of injecting saline solution, since he recognized that excessive sugar intake could be counteracted with an introduction of sodium. Kashiwamura concluded his story by showing respect for Ishizuka's insights and some *shokuyō* leaders who guided him toward the way of *shokuyō*.[20]

Thus, by basing his arguments on both laboratory and clinical reports, Sakurazawa launched his refutation of the then conventional approval of sugar. Here, his argument was not based on exposing the problems of sugar in so much as an attempt to completely remove sugar from daily consumption patterns. For instance, against the argument that the Japanese need to regularly take sugar because of the lack of glucose in the body, he pointed out the Japanese had already been taking enough glucose through their staples, especially by eating rice, barley and vegetables. Against the arguments that sucrose has the ability to elevate calories and gives a warming effects to its eaters, he rejected these effects as a mere temporary relief, and further claimed that people should be able to tell what their bodies really need when they feel fatigued: the needed nutrient may well be salt, fat, or sometimes starch as well.

It is important to note that Sakurazawa did not end his critique at this disproving of sucrose as a necessary intake but instead extended his critique beyond the realm of medical discourse. Even though his major target of criticism were medical and nutritional experts who circulated what he regarded as misleading knowledge, he claimed it was also important to notice that ordinary people were allured by the sweetness of sugar and as a result, wholeheartedly embraced its

[20] Ibid, 35-39.

consumption along with its perceived links to Westernized urban culture. In order to problematize this trend, he asked the basic question of how people suddenly come to have a sweet tooth. The answer to this question, he argued, was historical. According to him, the trend of an uninterrupted increase in sugar consumption in Japan and elsewhere in modern societies reflected the prevailing meaning of what was called "progress" and "civilization" at the time. This emphasis on "progress" and a "civilized" society in turn, encouraged the pursuing of easiness, idleness, convenience, and comfort in life rather than hardiness, wildness, crudeness. Accordingly, he argued that this general tendency toward life's comfort as a symbol of progress paralleled the shift in the nature of human appetites which welcomed the sweetness of sugar. Here, Sakurazawa is aiming his criticism toward the trend which was neatly encapsulated in a common expression like "sugar as a barometer of a culture." The growing popularity of sugar was seen as an expression of so-called "the cultured." He thus pointed out that people therefore tended to consider the consumption of sugar as more cultural and civilized. In other words, if one eats foods imported from abroad, if one uses imported products in daily life, if one lives in a western style house, if one eats meat and fruits rather than rice, and if one eats whiter sugar than unrefined one, these acts are all forms of life that enables one to be a cultured and civilized person. Hence, by denouncing the acclaim that an easy and cheap access to sugar contributed to human happiness, he attempted to point out the problems of linking sugar to a cultured life, even going to the extent of sarcastically declaring that such consumption practices merely contributed to fattening sugar businessmen's profits at the expense of the well being of the Japanese.[21]

It is worth noting here that Sakurazawa did consistently maintain a critical stance toward modern food industries, albeit in a rather radical way, as he paid a great

[21] Ibid, 17-20.

deal of attention to the issue of food additives and the use of chemicals in sugar manufacturing. He even postulated that white sugar itself was not as harmful as the chemicals used in the process of purification and refinement, such as sulfur dioxide gas, lime, and bone char to make sugar whiter and purer.[22] He considered these chemicals as invisible and tasteless "poisons," which were eventually attached to beautifully refined white sugar in the form of minute particles. It was not unusual to find similar cases of food contamination, he said, pointing to instances such as the recent "potter's clay in biscuits," reported in *Nagoya Newspaper*, in which some confectionary manufacturers intentionally added clay in their biscuits to hasten the dehydration process as well as make the products heavier; or the widespread use of calcium carbonate and tar colorants in order to produce colorful and attractive cookies and candies.[23]

With this worrisome phenomenon of extensive use of poisonous chemicals in food manufacturing, Sakurazawa went further to put forth a critique of the food industry in general, including *meriken-ko* (imported flour, mainly from the US) or vegetable oils. He maintained that the essence of the food industry lay in the process of converting food into commodities. This commodification of food meant, in other words, depriving it of its vitality and life by treating food with chemicals. The process is inevitable, he said, in order to extend its shelf life in the market. For example, freshly home milled wheat flour cannot last longer than one month in summer and three months in winter because it preserved "life" in it. Perishability, he said, was natural for food, yet not desirable for a commodity. Processed foods including refined sugar, therefore, lost its nature as food in order to be a product. The problem of modern food manufacturing, for Sakurazawa and other *shokuyō* advocates, lay in the

[22] Ibid, 52-53.
[23] Ibid, 39-42.

predicament that it developed with the aim to maximize profits while at the same time ignoring the aspect of food as a source of life for living beings.

Sakurazawa's criticism was broad enough to include the issues of food additives and chemicals in the burgeoning food industry in Japan. However, his claim on sugar production and consumption as an expression of pathological modernity was deeply imbued with moralism, rather than as a lamentation of the structural problems of the capitalist mode of production. It is thus no surprise that his solutions were invariably discussed at the level of personal awareness and moral decision. This primary focus on an individual's mindfulness of the nature and the human body tended to highlight therefore the consumption side of food culture in relation to its health effects. This characteristic of dealing with the problem of sucrose from the perspective of the consumer, a perspective that was shared by many other members of the Shokuyō association, resonated with a claim on moral consumption conducive to individual well-being.

For example, Nakayama Tadanao, a poet and medical critic, who wrote an influential book on the revival of traditional Kampo medicine and also a frequent contributor to the *Shokuyō* journal, was another individual who sought to highlight moral consumption as a means of rectifying social problems of the time.[24] In an essay entitled "Igaku to Keizaigaku" [Medicine and Economics] written in 1929, Nakayama fiercely criticized the communist party platform of the abolition of import tariffs on sugar. He deplored the upswing of sugar consumption over the last decades, pointing out its harmful effects on the bodies of the Japanese in a similar manner to Sakurazawa. Nakayama argued that the tariff abolitionists typically exemplified the dominant tendency of social movements, which only concerned a theory of distribution without taking into account the patterns and ramifications of consumption.

[24] Nakayama Tadanao, *Kampō Igaku no Shinkenkyū* (Tokyo: Hōbunkan, 1927).

Therefore, according to Nakayama, it was pointless to make sugar affordable to the working class without taking into account the problems caused by the overconsumption of sugar in both medical and economic senses. Considering the minimum cost of living is directly related to the cost for maintaining one's life and health, socio-economic measures should be simultaneously based on a sound medical orientation. Thus he argued that the problem of the proletariat derived not so much from low income itself as from "undesirable consumption patterns" that would eventually lead to diseases and poverty, as in the cases of consuming excessive amount of sugar, meat or alcohol.[25]

Thus, the *shokuyō* advocates not only shared the opinion on the harms of sugar but also uniformly stressed the significance of individual choice of right foods. In other words, the choice of healthy food and avoidance of harmful food were ultimately considered to be a moral decision for both individuals and the nation. Although Sakurazawa advanced a radical critique of modern food industries and food commodification at the general level, this criticism was not transmuted into his campaign activities. On one level, it is the oddity of this exclusion which also explains why their criticism of sugar and sugary culture remained inconspicuous to the general public. Unlike the case of *genmai*, in which the *shokuyō* sympathizers supported and cooperated with the legislation process and the *Yokusankai*'s initiative in their implementations, they did not find an appropriate vehicle to galvanize their anti-sugar crusade. This would however change after the outbreak of the Sino-Japanese War, where *shokuyō* supporters would eventually stumbled upon an appropriate avenue to stage their criticisms when the expanding Empire necessitated the reconsideration of the meaning of *shindo fuji*.

[25] Nakayama Tadanao, *Kampō Igaku Yodan* (Tokyo: Nakanishi Shobō), 59-62.

Shindo Fuji for the "Frontiers" of the Empire

Even though Sakurazawa and other *shokuyō* backers' medical and cultural critique of sugar consumption extended its target to urban culture and chemical use in food industries, the fundamental problem arose from the belief that Japanese sugar consumption was a violation of *shokuyō* theory's prime principle of *shindo fuji* (oneness of the body and soil). That is to say, according to Ishizuka Sagen and Nishihata Manabu's climatological understanding of "appropriate" foods for people living in the Japanese archipelago, sugar itself—regardless of the method of refining—was supposed to be off the list precisely because it came from tropical regions. As was discussed in the first section, the majority of raw sugar was imported from Taiwan, where the climate and soil are different from those of Japan. Sakurazawa claimed that since the human body and food are conditioned and bound together within the same soil, the kinds of glucose needed in the human body were different according to where one lives. In some regions, such as the tropics, the body requires glucose from sugar cane, whereas in other areas, such as temperate regions, the body needs glucose from barley or rice.[26] Just as their rationale in the case against meat eating, sugar was deemed good for those living in the tropical zone, but bad for the Japanese. Before moving on to discuss a campaign in Manchuria, the meaning and application of this seemingly enigmatic principle of *shindo fuji* needs to be further clarified.

Sakurazawa published a booklet series under the title of "Life and Food" (*Seimei to Shokumotsu Sōsho*) from 1934 onward, and its sixth volume elaborated on the principle of *shindo fuji* (*Shindo Fuji* hereafter).[27] In this 1936 booklet, Sakurazawa

[26] Sakurazawa, *Satō no Doku to Niku no Gai*, 16-7.
[27] Sakurazawa Yukikazu, *Shindo Fuji no Gensoku* [Principles of the Oneness of Body and Soil] (Tokyo: Shokuyōkai, 1936). This booklet was republished as one section of *Seimeigenshō to Kankyō* [Life phenomenon and environment] in 1972. My page numbers for this booklet are from the 1972 version. Sakurazawa Yukikazu, *Seimeigenshō to Kankyō*

seemed to have departed from rigidly deterministic climatology he showed previously. Rather than sticking to schematic division of different climate zones and appropriate foods accordingly, he offered a less straightforward understanding of eating for all living beings in relation to land and soil. In order to explicate the interconnectedness of living organisms and their environment, Sakurazawa urged his readers to imagine pine trees in three different locations: a beach on Japanese coast; the province of Shinshū, the interior of Japan; and Novosibirsk in Siberia. In each location, he said, one can find the presence of black pine trees with short, curvy and thick shape, red pine trees with middling shape, and yellow pine trees with thin and tall shape. By highlighting different species of the supposed same pine tree in different regions, he sought to give a more complicated view of *shindo fuji*. According to him, just as the Chinese proverb says, "Tachibana turns into Karatachi when it crosses the River," living organisms change not only their forms and colors, but also their compositions to best adapt to their environments. It is this observation that allows him to postulate that as long as all living organisms are the products of their climate and soil (*fūdo*), they are never able to survive independent of the soil and air.[28]

Here, plants provide an important mediation between the land and its inhabitants. Sakurazawa called plant organisms the shape-shifters of the land (*tsuchi no obake*) in a sense that they are the primary producers that transform inorganic substances from the soil into organic ones. By the same line of reasoning, animals, including humans, are shape-shifters of shape-shifters (*obake no obake*) since they feed on plants or other animals. This process of shape-shifting as such, he argued, can

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(Tokyo: Nihon CI Kyōkai, 1972). The 1936 and 1972 versions are essentially the same in terms of contents. However, prewar version's subtitle "Kannagarano oshimono no michi"[The way of divine food] was removed in the postwar version; any words that have Shinto connotations such as *kamiyo* [the age of gods] or *shinkoku* [a divine land] were also removed in the postwar publication.

[28] Sakurazawa, *Shindo Fuji no Gensoku*, 9-14.

be called life phenomenon, all of which can occur only through the medium of food at every stage. In this picture of ecosystem, Sakurazawa postulated that humans (or animals in general) should be characterized as something similar to a flowing stream. Although it appears that humans maintain the same face day after day, their body compositions change every moment by way of the ceaseless process of ingesting, digesting, and excreting. Just as a stream appears to have a stable shape, so do humans appear to have the unchangeable body. However, this static appearance hides the fact that underneath their skins, human bodies are constantly in change. In Sakurazawa's explication, just as a stream does not hold the same water at any second, so is a person not the same person at any moment. Therefore, if a person is like a stream, food is like water that always flows and vitalize the stream.[29]

Once living organisms are comprehended this way, Sakurazawa emphasized the body's liability to change and reshape its features. Attempting to refute the assumption that a person's temperament (*kishitsu*) is fixed and permanent as fallacious, he stressed both significance and changeability of temperament. By shifting analysis of one's body from it as a fixed living system to one that is able to shift and adapt constantly due to the changes in temperament, he argues that the causes of disease should no longer be exclusively understood in terms of germs or heredity. Instead, Sakurazawa wrote, this temperament should be taken into account as the most important factor in disease etiology. As temperament is called *terroir* in French, which means the soil and climate, this etymological explanation meant that a person's temperament functions as a culture medium (*baiyōki*) of diseases. This is the reason why Sakurazawa concludes that to prevent or cure diseases, one essentially needs to build a sound, healthy temperament.[30] The principle of *shindo fuji*, therefore, was

[29] Ibid, 15-16.
[30] Ibid, 19-20.

proposed as an act of providing the body with "appropriate"(*tadashii*) sources of life, that is to say, foods from the same land one inhabits as well as for the seasons. By adding to this tenet one more rule of minimized processing such as milling, peeling, and refining, the *shokuyō* practical dictums can be formulated simply as follows: eat locally, seasonally, and naturally.

Not surprisingly, the discussion of climate and soil (*fūdo*)[31] in relation to the human body being part of it, led to the nationalistic claim about food suited for the Japanese nation (*Nihon minzoku*). Arguing that traditional customs, taboos and rituals related to food generally have underlying physiological grounds based on long-term cumulative experience, Sakurazawa affirmed that these invariably contain practical diet regimens "peculiar to each region as a strategy designed to improve individuals' health and thereby solidifying the foundation of the entire nation's health and happiness."[32] In light of this, Sakurazawa interpreted the symptoms of collective degeneration of the Japanese nation as the result of the failure to abide by the principle of *shindo fuji*. Pointing out that the average lifespans of the Japanese are roughly ten years shorter than those of other European countries as of 1935, he attributed this general deteriorated health and shorter life spans to a variety of wrongful foodways that had detrimental effects on the overall health of the Japanese *taishitsu*: the sudden consumption of beef and cow milk; the overuse of sugar; the increasing popularity of polished rice; the widespread habits of peeling fruits and vegetables; as well as the increasing consumption of foods from faraway climates and soils such as coffee from

[31] Sakurazawa used the term *fūdo* frequently in explaining *shindo fuji*, yet it is not certain he had in mind Watsuji Tetsurō's usage of the same term.
[32] Ibid, 25.

Brazil, tea from India, tempura shrimps from Mexico, tuna from distant oceans, soybean miso from Manchuria.[33]

Nonetheless, although the principle of *shindo fuji* had been championed by previous *shokuyō* leaders, by the time Sakurazawa wrote the "Life and Food" series in the late 1930s it was no longer possible to merely discuss "righteous foods" for peoples living in the archipelago. With the rapid expansion of the Empire after the Second Sino-Japanese War in 1937, the spatial dimension of *fūdo* became complicated. In the preface of his book *Manshū Shokuyō Tokuhon* [*A Manual for Shokuyō in Manchuria*], Sakurazawa revealed that he had been flooded with inquiries from his readers asking what they ought to eat in Manchuria or in the South Seas (*Nanyō*) after his successful book *Shin Shokuyō Ryohō* [*New Shokuyō Therapy*] being sold over fifty impressions.[34] With the massive movements of the Imperial troops as well as settlers into Northeast China and Southeast Asia, the *shokuyō* campaigners now faced new tasks of accounting for these migrating populations in dissimilar climate zones in their theory of *shindo fuji*.

Obviously, the consideration of migrants' foods was not merely about practical tips for the relocating population in the colonies and occupied territories, but also a manifestation of imperial consciousness and ambitions to successfully survive and better rule over the locals in these distant territories. From the perspective of managing the expanding Empire, there was all the more reason to promote the *shindo fuji* principle beyond the metropole. Sakurazawa understood this point clearly even before mass migrations and an invasion to Southeast Asia started. In the primer *Shindo Fuji*,

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[33] The figures Sakurazawa included for this comparison are as follows: Japan, 44 years (male) and 46 years (female); UK, 55 and 59; France, 52 and 55; Germany, 55 and 58. Ibid, 29-30 and 34-36.

[34] Sakurazawa Yukikazu, *Manshū Shokuyō Tokuhon* (Tokyo: Nihon Shokuyō Kenkyujo, 1939), 12. As for the dietary regimen for those in the South Sea Islands, Sakurazawa added a thirty-page appendix in his book, *Hakō Ichiu no Shokuseikatsu Genri: Atarashii Eiyōgaku* (Ōtsu: Musō Genri Kōkyūjo, 1942).

he urged the readers to learn from Japan's historical "failures" to colonize foreign territories.

> From old times, the Japanese never succeeded in colonization. There were times when we conquered Korea [Chosun], but it did not last long. Recently, emigration to Manchuria has started, but it occurred to me that there are movements against the flow of nature there. For instance, Manchurians [Manshūjin] and Chinese [Shinajin] have been living by following the course of nature for thousands of years. The laborers can afford their foods by only paying ten to fifteen *sen* per day. They acclimate themselves to such harsh weather and struggle in the wilds by living on the staples like sorghum and millet with some salted additional leek and garlic. On the other hand, the Japanese consume expensive meat, fish and white rice ordered from our *naichi* [mainland Japan proper]. Even Kwantung Army seems to do the same. Their daily expenses for food amount to a few times more than those of the locals. This way the Japanese cannot compete with them economically to begin with. The economic factor aside, it is impossible to beat them physiologically. If this condition continues, the Japanese will disappear without a trace in a few decades or centuries. ……. The reason Ainu people are dying out is also because they are likewise going against nature. Sadly, the administrators who are to help them, do not understand this aspect at all. No one seems to know the harmful effects of potatoes, which is killing the Ainu people. The Heavenly way (*tendō*), with no mercy, took a nation (*minzoku*)'s life like slashing a *daikon*.[35]

The passage appears to praise local laborers' foodway that abide by the law of nature by contrasting it with the "extravagant" lifestyle of the Japanese settlers. Also, Sakurazawa's call to "learn from the natives" indeed countered the tendency commonly found in Japanese settler communities within the Empire, in which maintaining Japanese-style cuisine with the use of sumptuous products such as sugar, white rice, Kikkoman soy sauce and Ajinomoto powders signified the settlers' cultural affinity to the homeland, as well as a socio-economic status marker between colonizers and the colonized. For example, when a Japanese settler organization (Ryokki renmei) in colonial Korea encouraged the Japanese residing in Korea to incorporate more local ingredients like foreign rice (*gaimai*) and wild greens (*nogusa*)

[35] Sakurazawa, *Shindo Fuji no Gensoku*, 38-9.

in the face of food shortages in 1941, their *Manual of Home Cuisine* also demonstrated strong anxieties of the blurring boundaries between the Japanese and local Koreans.[36] Not surprisingly, this phenomenon was ubiquitous in other colonial settings as well. In French Equatorial Africa, in a similar vein, French colonialists' foodways reflected their desire to express power over African subjects. Deborah Neill remarked, "[I]t was also highly symbolic, designed to demarcate social space, assert social, economic and political power, and reinforce class or racial differences."[37]

Nonetheless, Sakurazawa's seemingly pointed critique of Japanese settlers was by no means a criticism against imperialism and colonial domination as such. Rather, it was closer to a sectarian suggestion to refashion the dominant culture and lifestyle in the colonial enterprise in a way that would better serve high-minded imperial project by strengthening the bodies of the Japanese subjects as members of the leading nation. Just like the ideal of *Ōdō*, the Kingly Way, was propagated as a new governing ideology in Manchukuo, Sakurazawa envisioned *shokuyō*'s *shindo fuji* principle could similarly offer a new foundation for healthy lifestyles to Japanese settlers in Manchuria. However, just as the ideology of *Ōdō* concealed brutal violence involved in colonial domination by contrasting itself with *Hadō* [the Way of Might/Force], natural laws of *shindo fuji*, or what Sakurazawa called Heavenly Way, also made it a form of invisible military aggression by consciously ignoring the coercive nature of colonialism. In his eyes clearly, the Ainu was "naturally dying out" by eating wrong foods like potatoes, rather than "being subjugated and killed" by the Japanese colonizers as well as by the collapse of their lifeways.

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[36] Helen Lee, "Eating for the Emperor: The Nationalization of Settler Homes and Bodies in the Kōminka Era," in *Reading Colonial Japan: Text, Context, and Critique*, ed. Mason and Lee (Stanford, California: Stanford University Press, 2012), 159-177.

[37] See Deborah Neill, "Finding the "Ideal Diet": Nutrition, Culture, and Dietary Practices in France and French Equatorial Africa, c. 1890s to 1920s," *Food and Foodways* 17(1) (2009), 21.

Intervening in Settler Hygiene in Manchuria

If the *shindo fuji* principle prescribed sugar as a undesirable food for those living outside the tropics, why were the *shokuyō* advocates so attentive to sugar consumption in Manchuria compared to that in the metropole? One of the reasons behind Sakurazawa and other *shokuyō* activists' extensive attention to Manchuria can be found in their special caution against sugar consumption in cold regions. Pointing out that children who eat a lot of sweets are more likely to suffer from frostbite during winter, Sakurazawa suggested that people living in colder climate should carefully limit their sugar intake while paying attention to taking enough salt and fat. Pointing to the people living in the inland parts of the Japanese archipelago in places like Shinshū, where winter is particularly colder than other areas in Japan, Sakurazawa shows how traditionally these people had used to make it a rule not to use sugar for daily consumption. Therefore, Sakurazawa advised that the colder the place one lives in, the less sugar and the more salt one needs; otherwise, he claimed, one would become the victim of various kinds of diseases by making one's body weaker and vulnerable to bacteria and virus. One such case, Sakurazawa observed, was found in the failure of the Japanese migrants to Manchuria, most of who continued to maintain their dietary pattern of eating white rice and sugary foods after migrating into Northern Manchuria, where winter is even colder and harsher than in Shinshū.[38]

Although much of their criticism was initially targeted at the consumption of sugary foods as one of the most "unhealthy customs" brought over to the new frontier of Manchuria by the Japanese migrants, the *shokuyō* members broadened their interest to general health issues of the Manchurian migrants after the agricultural migration program initiated. Sakurazawa made a short trip to Manchuria to investigate locally

[38] Sakurazawa, *Satō no Doku to Niku no Gai*, 48.

produced food appropriate for the Japanese, and published *A Manual for Shokuyō in Manchuria* in the fall of 1939, in which he disapproved of the basis of existing hygienic and medical administration in Manchuria. The following year of 1940 saw a substantial advance in the *shokuyō* movement: in cooperation with some newly acquired members who were institutionally or personally affiliated with the Manchukuo government or the South Manchuria Railway Company (SMR, hereafter), the Shokuyō Association organized workshops and roundtable discussions in major cities, as well as food and health survey trips to the Japanese settler villages and the Youth Corps Camps in northern Manchuria. As an accumulation of their observations of those villages and camps, Sakurazawa published an edited volume entitled *Manshūkoku no Kōsei Undō* [*The Welfare Movement in Manchukuo*] with some of the volume's contributors also writing articles in the special issue of the monthly journal *Shokuyō,* under the subtitle, "*Shokuyō* Reaching Out to Manchuria."[39] In addition, a local chapter of the Shokuyō Association was set up in Dalian and convened monthly roundtable discussions to propagate the notion and practical tips of *shokuyō*.

It is not impossible to see that the *shokuyō* advocates' intense interest in Manchuria was propelled by the implementation of massive migration projects initiated from the late 1930s. Because of this, their interventions into hygienic policies for the Japanese settlers in Manchuria needs to be situated in the context of colonial medicine and hygiene within the Japanese colonial Empire. Japanese colonial medicine originated in the tropical medicine in Taiwan, where the colonial authorities had to deal with recurring malaria epidemics. The experience in Taiwan was modeled onto other colonies and occupied territories such as the Kwantung Leased Territory,

[39] Sakurazawa Yukikazu, ed., *Manshūkoku no Kōsei Undō* (Tokyo: Shokuyōkai, 1940).

colonial Korea and the islands of the South Sea mandate.[40] In the case of Manchuria, the SMR led medical surveys and measures against epidemics in the Kwantung Leased Territory and the South Manchuria Railway Zone after the regions came under the Japanese rule as a result of the Russo-Japanese War. The SMR also established the South Manchuria Medical College in Fengtian (or *Nanman igakudō* in 1911, which was later named the Manchurian Medical University, or *Manshū Ika Daigaku* in 1922), which became the center of colonial medicine in Manchuria even after the establishment of Manchukuo in 1932. In addition, the Hygienic Institute of the SMR Co. (*Mantetsu Eisei Kenkyūsho*) was established in Dalian in 1927 and it started conducting extensive surveys on the Japanese residents as well as local Chinese and Korean populations, local epidemics such as typhus and scarlet fever, pharmaceutical manufacturing, and hygienic conditions on food and water qualities.[41]

Colonial medicine and hygiene in Manchuria demonstrated a drastic leap forward along with the authorities' plan to transplant Japanese farmers after the establishment of Manchukuo in 1932. In comparison to the previous policies which were virtually limited to major cities like Fengtian and Dalian, and the Railway Zone, more extensive medical surveys and hygienic measures started off a year after the initial pilot migration program was implemented. The Manchurian Medical University and Hygienic Institute of the SMR launched a comprehensive two-year survey on the climate and hygiene of the entire Manchuria with a special focus on the pilot migration sites in northern Manchukuo between 1933-34. The major task force from the survey team was headed by the Research Committee for Migration Hygiene (*Imin Eisei Chōsa Iinkai*, first under the Kwantung Bureau and then under the Department of

[40] Iijima Wataru, "Kindai nihon no nettaiigaku to kaitauigaku," in *Shippei, kaihatsu, teikoku iryō: Ajia ni okeru byōki to iryō no rekishigaku*, ed. Miichi Masatoshi et. al. (Tōkyō: Tōkyō Daigaku Shuppankai, 2001), 213-4.
[41] Iijima, "Kindai nihon no Nettaiigaku to Kaitakuigaku," 230.

Welfare, or *Minsheng* of Manchukuo), which was expanded and strengthened to include 25 committee members from various sectors of health related institutions by 1937. As the new long-term master plan for the Settlement of One Million Households over Twenty Years was set up, and the Japanese extraterritoriality was abolished in 1937, the Manchukuo government in cooperation with the SMR and the Manchurian Medical University, drastically increased resources and personnel involved in hygienic measures for the Japanese settlers.[42]

Despite its seemingly smooth development of massive migration policies, the Japanese settlement in northern Manchuria was in fact fraught with tensions and obstacles. Especially after the successful suppression of the local armed uprisings by the end of 1934,[43] the internal problem of the settlement project still remained: the survival and well being of the Japanese migrants in the harsh environment in northeast Manchuria. It was repeatedly reported that the majority of Japanese migrants, unlike their local Chinese counterparts, suffered from severe dysentery in their initial stage of settlement to the extent that it had impact on farming production and other everyday tasks. While acknowledging various explanations for this disparity, the medical officials supposed that it was mainly due to the difference in food consumption between the Japanese and the locals.[44]

Therefore, at this stage of massive agricultural migration, colonial medicine in Manchuria could not be confined to urgent and narrow medical issues such as control of plague or vaccination; it had to deal with everything that would affect the survival

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[42] Eda Izumi, "Manshū ikadaigaku to 'kaitaku eisei'," *Mita Journal of Economics* 97-2 (2004): 283-4.

[43] The Tulongshan Incident, for example, was an armed uprising by some ten thousand of local Chinese farmers in the Sanjiang Province, in which they disarmed the first and second pilot Japanese villages in opposition to the Kwantung army's policies of local farm purchase, disarmament, and, interestingly, vaccination.

[44] Manshūkoku shi Hensan Kankōkai, *Manshūkoku Shi Kakuron* (Tōkyō: Manmō Dōhō Engokai, 1971), 840.

of the settlers. In other words, settler hygiene (*kaitaku eisei*) not only concerned epidemiology of the Japanese migrants, but more importantly, intervened in every detail about what they ought to eat, drink, and wear, as well as where they should live at. In this sense, it comes as no surprise that reports and surveys for settler hygiene invariably centered on the problem of acclimation. Medical officials were well aware that the key to success of Manchurian migration lay in how to successfully adapt to the Manchurian environment. In other words, they were concerned with how to cultivate the Japanese nation's capability to acclimate itself to the northern frontier (*fūdo junkaryoku*).[45] To this end, Miura Un'ichi, a professor at the Manchuria Medical University, built seven model houses of three different types, which adopted advantages of Japanese, Chinese and Russian houses in order to design an optimized form of housing for the Japanese settlers. Miura compared the functionality of each model, ranging from the material and structure of wall and roof, the systems of heating, damp proofing, sunlight receptivity and ventilation to necessities such as night soil disposal.[46] The tasks of the Research Committee for Migration Hygiene always included laborious collection of data on the problems the settlers faced in terms of housing, food, water, cattle hygiene, and epidemics in such a way that these surveys and studies contribute to improving Japanese immigrants' adaptability to the new environment.

It is worth noting here that the presence of sick Japanese settlers and desperate efforts to learn from the Chinese and Russian local customs demonstrated a widening gap between what the Japanese ought to be and what they actually were like. The idea that Japanese population in Manchukuo as a "leading superior" nation would never be tenable with a higher incidence of disease and mortality rate. As much as a sense of

[45] Iijima, "Kindai Nihon no Nettaiigaku to Kaitakuigaku," 231-2.
[46] Eda Izumi, "Manshū ikadaigaku to 'kaitaku eisei'," *Mita Journal of Economics* 97-2 (2004): 283.

crisis regarding the physical survival of the Japanese settlers persisted, the notion of Japanese adaptability to the Manchurian climate became a self-legitimizing imperative. Kuno Yasu, a physiology professor at the Medical School of Nagoya University and former professor of the South Manchuria Medical College, maintained that Japanese people's physiological capability to adapt to colder climate is superior to the white race's ability to habituate themselves to the tropics, and that Japanese colonization can be characterized as "scientific colonization" underpinned by science and hygiene.[47] This statement resonated with another hygiene official's observation on the Japanese race's characteristic of being "far more inclined and appropriate to the south than the Europeans."[48] However, Kuno placed a stronger emphasis on the capability to adapt to the north, rather than their innate nature, by focusing on the possibility or potential of the Japanese race to prosper in Manchuria in the years to come.

In an attempt to improve the settlers' adaptability, the analyses of food ingredients and eating patterns of the Japanese settlers particularly attracted the attention of health workers and scientists, not only because eating habit and appetite were one of the most inflexible and adamant elements for any migrant groups, but also because a number of diseases suffered only by the Japanese settlers are attributed to the difference in foods. As far as the practical suggestions for the rural settlers in Manchuria are concerned, it is not difficult to find guidelines similar to what *shokuyō* advocates called *shindo fuji*. Marumoto Shōzō, a prolific army physician who led the Army Provision Bureau, delivered lectures to prospective Manchurian brides (*tairiku hanayome*) in Nagano in 1938. Deploring the fact that Japanese settlers in Manchuria

[47] Kuno Yasu, "Kaitaku Eisei no Konpon Mondai," in *Manshū Kaitaku Eisei no Kiso*, ed. Kosaka Takao (Tokyo: Kanehara Shōten, 1941), 21-26.
[48] Cited from Tomiyama Ichirō, "Sciences of the Tropical Zone," in *Deconstructing Nationality*, ed. Naoki Sakai et. al. (Ithaca: Cornell East Asia Series, 2005), 49.

are sicklier than any other ethnic groups, Marumoto stressed the importance of women's role in the settler community to redress this situation. Since daily food consumption is crucial to maintaining overall health and well-being of the migrants, he claimed, future Manchurian brides were required to be aware of what constitutes a healthy and nutritious meal in Manchuria. Marumoto's suggestions included: the switching from white rice eating to that of mixed grains in order to prevent the beriberi, digestive disorders, and tuberculosis; eat more food rich in protein, especially animal protein; increase seaweed intake for supplementing iodine; use more oils in cooking so that average consumption per person can be between 30-50g.[49]

Based on thoroughly rational-economic approach to ideal nutrition for Manchurian migrants, Marumoto did not bother encouraging future brides to stick to Japanese cuisine; rather he suggests that Japanese cuisine is not very necessary in Manchuria; instead it is required to try Western and Chinese dishes, such as pancake or *hong shao yu* (red-cooked fish).[50] Considering that immigrants tend to retain or strengthen their cultural identity through reproducing food culture from their motherland, the dietary suggestions for the settlers in Manchuria betray the extent to which they were viewed from the perspective of an urgent crisis in settler hygiene. Despite the health and nutrition experts unanimously warned against the harms of eating white rice, the Japanese settlers' appetite for white rice did not fade away. According to the survey conducted by the Tuberculosis Prevention Association of Manchuria in 1938, there was a clear-cut racialized food consumption pattern: Japanese settlers predominately ate white rice, whereas local Chinese and Koreans had

[49] Marumoto Shōzō, *Manshū tekiō shokuseikatsu no chishiki* (Tokyo: Ryōyūkai, 1939), 7-10.
[50] Ibid, 20-21, and appendix 8.

mixed grains of sorghum, millet, rice and corn as a staple; Japanese settlers frequently used white sugar, while locals consumed extremely small amount.[51]

This continued situation that underscored the dire health conditions of Japanese settlers, as well as the widespread perception of the link between health and food which I have highlighted above generated a favorable condition for the *shokuyō* campaign in Manchuria. Tamura Toshio, director of Manchukuo's Education Bureau, became a fervent supporter of the *shokuyō* campaign in Manchukuo. As a brilliant ideologue who knew the importance of the racial issue in governing peoples in Manchukuo, one of his primary concerns regarding national education was to enhance physical and moral fibers of the Japanese subjects insomuch as they can serve as a leading ethnic group. Pointing out that Japanese youth were inclined to suffer from various diseases even though Manchuria has in fact healthy soil and climate, Tamura argued that it is more urgent to guide them toward a healthy lifestyle rather than merely building new medical facilities; medical schools should put more effort in educating health commissioners as much as training medical specialists. In line with the ongoing lifestyle-rationalization movement, he says, the eating right campaign has been particularly highlighted, and food education has become indispensible for both public hygiene and general education in Manchukuo.[52]

It is not clear to what extent Tamura Toshio directly incorporated the *shokuyō* tenets in his education program at the policy level. In addition, not all health workers and officials who were interested in food issue for the settlers necessarily agreed on the solution offered by the *shokuyō* advocates. However, it is not difficult to postulate that some basic principles and conceptions behind dietary suggestions of *shokuyō*

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[51] Manshū Kekkaku Yohō Kyōkai, *Manshū Eisei no Jittai Chōsa* (Shinkyō: Manshū Kekkaku Yohō Kyōkai, 1939), 71, 74, 195, 226 and 227.
[52] Tamura Toshio, "Manshūkoku ni okeru tadashiki shokuseikatsu undō no hitsuyō to kanōsei," in *Manshūkoku no Kōsei Undō* ed. Sakurazawa Yukikazu (Tokyo: Shokuyōkai, 1940), 18 and 23-24.

touched a chord with quite a few leading members of the Japanese community in Manchuria. The critical perspective the *shokuyō* campaign took against the existing biomedical establishment particularly attracted the attention of those who found that the Japanese settlers in Manchuria were in a serious crisis. Ōkohira Takamitsu's ambitious medical campaign trips to Manchukuo, in this sense, provide a glimpse into the reception of *shokuyō* in this setting. Ōkohira studied colonial studies at Kyoto University under Nitobe Inazō and after graduation he served as a high-ranking employee for the SMR in Fengtian (Shenyang), Gongzhuling and Dalian between 1906 and 1917. During his service for the SMR, he was involved in the city construction in Fengtian, administrative affairs of the Japanese community in the Railway Zones as well as in agricultural and industry research in a branch of the SMR Industrial Technology Institute.[53]

Ōkohira had not returned to Manchuria for more than two decades after he came back to Japan, but his second son's migration to northern Manchuria as a leader of the eighth migration group made him revisit Manchuria in the spring and fall of 1939. In the course of his trips, he not only visited major cities of Manchukuo but also looked around some of the dormitories for the SMR employees and the Youth Corps, and Japanese settlers' villages. Everywhere he dropped in, he dispiritedly witnessed poor living conditions, high infant mortality, and patients of tuberculosis, beriberi and venereal diseases. After comparing the health conditions between the Japanese settlers and some neighboring Chinese peasants, Ōkohira lamented: "Now I completely agree to a certain Manchukuo civil servant's prediction that in ten years the Japanese would end up retreating from northern Manchuria, only leaving behind millions of tombs and modern facilities."[54]

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[53] Ōkohira Takamitsu, *Ashita no Manshū* (Tokyo: Dainihon Hōrei Shuppan), 30-31.
[54] Ibid, 130.

As to the question of what caused this miserable situation of Japanese settlers, Ōkohira claims that, it was not due to lack of money or resources. Conversely, compared to Chinese and Korean farmers, Japanese settlers or the SMR employees enjoyed a much higher living standard. The young SMR employees in Qiqihar frequented confectionery shops, cafes and even *ryōtei*, high-class Japanese-style restaurants; and settlers in remote areas still stuck to *tatami* room, Japanese clothing, white rice and sugary foods. Ōkohira rejected the idea which he assumed to be held by many settlers that maintaining Japanese lifestyle was a way to express the Japanese spirit (*Nihon seishin*). Instead, he argued that the true meaning of *hakkō ichiu* [eight corners of the world under one roof] must depart from such a narrow and essentialist viewpoint; *hakkō ichiu*, the new cardinal rule for the Empire should be based on the principle of nature—obedience to Mother Nature. As a student of colonial studies who wrote a book on Japanese migration and himself a former colonial administrator, Ōkohira held that immigrants to Manchukuo should be flexible enough to follow indigenous customs in order to survive and prosper in the new environment. This perspective came to show an inflection of ecological determinism in his 1930s writings, to the extent that native customs were represented by its natural environment, "climate and soil." Practically, he claimed, the best way to abide by the law of nature was to consume gifts from the land deity, i.e. seasonal and local agricultural produce from the region. Because of this emphasis on the ecological determinism of one's lifestyle, Ōkohira found the *shokuyō* doctrine of *shindo fuji* to be in perfect accord with his understanding of *hakkō ichiu* for Japanese migrants.[55] The recipes and menu developed based on the principle of *shindo fuji* recommended mixed grains for the staple just as Marumoto did, but used more local ingredients and strictly excluded the ingredients commonly used in Japan such as sugar, white rice, baking power, or

[55] Ibid, 124-9.

Ajinomoto. They imitated the simple diet of Chinese working class, mostly composed of staple grains without rice, accompanied by side dishes made of tofu, soy bean, and vegetables.[56]

Yet this did not mean that all such ideas that married one's living on the land with a specific diet were in concord with each other. Moriyama Shima, a *shokuyō* educator and recipe developer, suggested some examples of seasonal daily menu for Japanese settlers in northern Manchukuo in addition to the recipes for each dish. A closer look at her recipes shows striking differences between the *shokuyō* and the Army Provision Bureau versions of recommended ingredients and cooking methods, even though both emphasized local adaptability. For example, for a similar dish of steamed bread, Moriyama used home-milled whole wheat, salt and water, whereas Marumoto's version included regular flour, beans, sugar, salt and baking powder. Particularly in terms of sugar consumption, Moriyama added minimum amount of black sugar for sorghum biscuit or *shiruko* [sweetened *azuki* soup] and never used sugar for side dishes, while Marumoto used sugar not only as sweetener for desserts but also as a seasoning for general dishes such as steamed fish and stir-fried vegetables.[57]

Right returning to Japan from his second trip in 1939, Ōkohira started planning a health campaign trip to Manchuria. Setting up a *hakkō ichiu* health volunteer team, he was able to secure support from the SMR and both Japanese and Manchukuo governments. Ōkohira also visited the Shokuyō Association to seek advice as well as join his membership. In February of the following year, the campaign team of five physicians and seven assistants led by Ōkohira, departed Tokyo for Manchukuo. In

[56] Moriyama Shima, Manshū ni okeru nichijōshoku no kondate" in *Manshūkoku no Kōsei Undō* ed. Sakurazawa Yukikazu.
[57] Moriyama, Ibid, 89; Marumoto, *Manshū tekiō shokuseikatsu no chishiki*, appendix 4, 8 and 9.

Dalian, Fengtian, Xinjing, Harbin, Jiamusi, and Qiqihar, his team visited major medical facilities and the SMR branches, and offered workshops and roundtable discussions to propagate the *shokuyō* regimen and its philosophy. According to Ōkohira's travel report, written in the format of a letter sent to Sakurazawa Yukikazu, in every gathering he encountered unexpectedly enthusiastic responses from not only medical and nutrition experts but also the general public of local Japanese community, and the meetings often ended up running over schedule due to the heated debates and endless questions. Ōkohira also confessed that medical practitioners in Manchuria demonstrated significantly more favorable responses to the critique of existing medical establishment and its failure to deal with health issues of the Japanese race than those practicing in Japan.[58]

It seems that Ōkohira's passionate and evangelist activities in Manchuria with the help of his personal network with some high-ranking government and SMR officials presumably facilitated the spread of *shokuyō* campaign in Manchuria, especially among Manchukuo's government officials, educators, journalists and public health workers. Tamura Toshio collaborated with Ōkohira to establish the Manchurian *Shokuyō* Association; and the Manchukuo government invited Sakurazawa for lectures and cooking workshops shortly after Ōkohira's trip. Needless to say, this rapid advancement of *shokuyō* into Manchukuo was only possible because there had already existed a conception that there is an inextricable relationship between food, environment and pubic health, and the maintenance of this relationship as the correct way of improving the Japanese settlers' adaptability in northern Manchuria. Furthermore, when it comes to anti-biomedical and holistic perspective on the human body advocated by the *shokuyō* movement, there seems to have been more room for maneuver in Manchuria than in the metropole. In Manchukuo, unlike the metropolitan

[58] Ōkohira Takamitsu, "Manshū no shokuyō kokusakuka ūndō," *Shokuyō* 34-4 (1940): 21-26.

Japan or other colonies, the government reversed its existing oppressive measure against traditional medicine (Kampō) in 1940, attracting the leading Japanese medical practitioners and scientists in the Kampō revival movement.[59] This was the milieu in which the *shokuyō* movement rapidly found some enthusiastic supporters in Manchukuo, and Sakurazawa was able to expand his *shindo fuji* principle into something applicable at the level of the Empire for its imperial subjects.

As I have shown in this chapter, sucrose, which gained cultural meanings of modernization and progress ever since the Meiji period, became one of the major targets of criticism by the *shokuyō* theorists. However, around the time raw sugar importation started to be restricted after the outbreak of the Sino-Japanese War in 1937, the mainstream medical discourse back in Japan also spoke of refined sugar's negative effects on the human body. When sugar became a ration item in 1940 and up until the end of the war during which a severe sugar shortage hit the country, the anti-sugar argument became increasingly vocal. In the meantime, the *shokuyō* campaign's intervention in the migrants diet in Manchuria centered on encouraging miscellaneous local whole grains and discouraging white rice and sugary foods. Sakurazawa's formulation of the basic principle of *shindo fuji* found an extraordinarily undesirable case in the emigrants' diet in northern Manchuria, since sucrose intake was considered an more undesirable option for the migrants living in cold regions than those living in the Japanese archipelago. In line with the ongoing research and campaigns by the health experts to improve the Japanese migrants' physical adaptability in Manchuria, some *shokuyō* activists sought to gain a foothold in Manchukuo to promote their ideal

[59] Ōhira Tokuzō, former director of the Medical School of Kyushu University, became a chief scientist of Manchukuo Department of Welfare (Minshengbu), and participated in this protective measure for the Kampō medicine in Manchukuo. Ōhira was deeply sympathetic to the *shokuyō* campaign in Manchuria and also became a founding member of The Association for East Asian Nutrition (Daitō Eiyō Gakkai) in 1943. *Osaka Mainichi Shinbun* 1943. 4. 6.

of *shindo fuji* based on the vitality and interrelatedness of human bodies and nature. Sakurazawa's stance toward indigenous populations' more "natural" and appropriate diet in the region, interestingly enough, resembles that of Weston Price, an American dentist who wrote a controversial classic, *Nutrition and Physical Degeneration* in 1939. As with Price who sought the "wisdom of primitive peoples" who were more efficient in complying with Nature's laws by not eating white-flour products, sugar, polished rice, and canned goods,[60] Sakurazawa sought to learn from Chinese coolies who did not (or could not) embrace modernized food items.

[60] Price, Weston A., *Nutrition and Physical Degeneration* 50th anniversary ed. (New Canaan, CT: Keats, 1989), 256.

CONCLUSION

On the threshold of the twentieth century in Japan, both academic and popular discourses on "eating right" were informed by various sources of knowledge and traditions, ranging from modern nutrition science, medicine, home economics, religions, folk wisdom to physiognomy. In the midst of the modern transformation of the society since the Meiji Restoration (1868), the introduction and institutionalization of European (German, more specifically) biomedicine was rapidly accomplished on the one hand, while knowledge outside of the legitimate realm of Western medicine such as traditional Sino-Japanese (*Kampo*) medicine was increasingly marginalized on the other. However, a variety of dietary discourses continued to draw upon a wider scope of practical and experiential knowledge beyond the medical establishment. This dissertation investigated one of the most conspicuous currents of such claims, *shokuyō*, which revolved around the concept of "eating right (*seishoku*)" as a kind of "nature's" (*shizen*) medicine.

Even though the notion that links health and food can be commonly found in Asian medical traditions, a military pharmacist, Ishizuka Sagen (1851-1909) reformulated the idea into a distinctly new dietary program based on the chemically derived mineral balance between potassium and sodium. As I have shown in Chapter One, Ishizuka took an eclectic perspective and drew extensively on the nineteenth-century chemical analyses of food, traditional Chinese medicine, as well as the Daoist life-nurturing traditions (*yōjō*) from the Edo period texts. To promote his ideas, Ishizuka and his supporters established the Imperial Food Education Society (*Shokuikukai*, later the Shokuyō Association from 1907 onward) in 1905 for the purpose of promoting a "scientific and righteous diet and thereby renovating the bodies of imperial subjects." The activities of the Association reached its peak during

the wartime period of the 1930s-1940s, under the leadership of Sakurazawa Yukikazu (a.k.a. George Ohsawa, 1893-1966), the founder of the Macrobiotic diet. Sakurazawa's program attracted more followers in North America and Europe than in Japan in the postwar period, particularly as a counter-culture during the 1960s. At the same time, other factions of the prewar campaign supporters diverged and coalesced into a group of physicians who sought to integrate traditional Sino-Japanese medicine into a greater sphere of biomedicine in postwar Japan.

This dissertation's narrative started by illuminating how the movement and discourse of the dietary reform came into being and developed as a distinct faction of public health campaign centering around the term *shokuyō*. I situated the emergence of this movement within the historical context of the late Meiji period by mapping the contours of the discourse on hygiene, health, and the overarching project of civilization and enlightenment. I argued that despite its professed proclivity for "traditional" ways of therapy and eating habits, the movement's formulation of brown rice into the quintessential Japanese staple food was a modernist reaction to create and re-build a once lost cultural identity as Japanese, by resorting to a kind of "invention of tradition." In the following chapters, I examined the writings of the three leading advocates of *shokuyō*, namely, Ishizuka Sagen, Futaki Kenzō, and Sakurazawa Yukikazu, revealing how the three figures' writings provided the theoretical foundations for the movement. Their combined writings demonstrated the extensive scope of the movement's multi-layered discourse with regards to food and health. Ishizuka, as the theoretical founder of the *shokuyō* movement, introduced a perspective on nutrition and human physiology by integrating the findings and concepts of modern chemistry into his own theory of a mineral-balanced diet. Embedded firmly in formal institutions and academia as a faculty member of the Medical College of the Imperial University of Tokyo, Futaki Kenzō then adopted

some of Ishizuka's main themes and combined them with scientific data and practical guidelines. Writing in the 1930s, Sakurazawa Yukikazu reconceptualized *shokuyō* theories into an ideological practice of Natural Medicine by integrating conceptual apparatuses not only from contemporary French critiques of biomedicine, but also from modern ecology, the yin-yang theory, and most importantly, Shinto ideology.

Nonetheless, so long as the *shokuyō* movement existed as a movement or a public campaign, it is important to explore how its tenets were understood and practiced by the participants. My discussion throughout the chapters consistently paid attention to this performative side. One of the striking features of the leaders or active participants' narratives was an emphasis on their embodied curing experience through the *shokuyō* dietary regime. In addition, as is typically shown in the testimonials of so-called alternative medicine, their narratives include a sense of frustration with conventional medical treatments, which invariably led them to experiment with the *shokuyō* regimen. Whether their healing experiences were due to a dietary change or not is beyond the scope of my analysis. Instead, I argue that such embodied experience offers a hint to explain fervent participants' zeal for and their long-term allegiance to the dietary regime. Furthermore, when such enthusiasm was integrated into political orientations with a moralistic hue, as was shown during the wartime period, it readily galvanized imperial subjects into political action.

In such a way, the history of *shokuyō* movement of the 1930s witnessed the transformation from an esoteric and upper-class-centered campaign into a large-scale movement with a wider base of audiences. As the Sino-Japanese War turned into total war, adopting of scientific and rationalist approaches to human nutrition and food consumption became the key issue at stake in order to optimize and rationalize the distribution of resources in the face of the unprecedented food shortages. From the perspective of the advocates of the *shokuyō* movement, this meant a golden

opportunity to intervene in the debate on the national staple food in order to promote their decades-long valorization of *genmai*.

In the meantime, other major food ingredients such as sugar, meat and soybean, supplies of which were highly dependent on the colonial economies in Taiwan, Korea and Manchuria respectively, also became frequent themes of the diet reformers' criticism. I analyzed how their premonitions against "imported foods" were inextricably linked with the ideology of *shindo-fuji* (the oneness of the body and soil), which was later further developed into ecological food-regionalism by Sakurazawa and his successors. By analyzing the *shokuyō* crusade against sugar consumption of the Japanese "pioneer settlers" in Manchukuo, I argued that the *shokuyō* movement also took part in the colonial enterprise as an internal critic of the existing settler hygiene policy, and sought to strengthen the bodies of these imperial subjects through its active campaigns in Manchuria.

Even though the main focus of my dissertation is limited to the period ending in 1945, the *shokuyō* movement did not end with the collapse of the Japanese Empire. Its two-fold postwar development included the rise of integrative medicine (between traditional and biomedical modes) in Japan and the attempt to globalize the dietary regimen under the name of Macrobiotics abroad. In the immediate aftermath of World War Two, there was a movement toward resuscitating *Kampō* medicine spearheaded by a group of physicians. These individuals in medical professions, being particularly interested in the so-called unorthodox integrative medicine, sought wisdom in the writings of the prewar *shokuyō* movement. In 1954, they established an organization called The Japan Association of Holistic Medicine (*Nihon Sōgō Igakkai*). In their founding message, they proclaimed their intellectual debts to the *shokuyō*'s holistic perspective on the body, food, and environment. Almost concurrent with this endeavor was the reshaping of *shokuyō* theories under the name of Macrobiotics by Sakurazawa

Yukikazu and his disciples in North America and Europe. Despite the fact that Sakuraza's reconceptualization of the prewar *shokuyō* was heavily laden with the Shinto ideology and imperialism, the postwar Macrobiotic campaign made a successful transition by presenting itself as a mystic "Oriental" version of ecological vegetarianism.

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